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Scientific Idealism

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Scientific Idealism

OR

MATTER AND FORCE AND THEIR RELATION TO LIFE AND CONSCIOUSNESS

BY

WILLIAM KINGSLAND

AUTHOR OF

"THE MYSTIC QUEST," "THE ESOTERIC BASIS OF CHRISTIANITY," ETC.

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FOREWORD

THE great question, What is Life ? is one which may be asked and answered in many different ways ; but each individual must assuredly answer it in some manner or other, for he is confronted with it in a most undeniable and practical form, simply because he *is* alive.

Each one of us possesses life and consciousness, and we cannot avoid the problem : though we may fail to understand its real nature, and may even—with more or less success for a certain length of time—ignore it.

In its lowest and most material aspect the problem is simply one of daily bread—or daily pleasure. Many, indeed, are unconscious of the problem in any other form.

But man cannot live by bread alone : and, sooner or later, in the evolution of every individual there must come a time when the great problem assumes other and higher aspects.

In the history of man's endeavour to solve the problem of his own life, and the great Riddle of the Universe of which he is a part, these higher aspects fall into three categories, known respectively as Science, Philosophy, and Religion.

Each of these may be said to regard the problem from a different point of view, and each is commonly looked upon as more or less independent of the others.

To show that this is not so in reality is one of the main objects of this present work.

What is herein attempted, therefore, is somewhat in the nature of a synthesis of science, philosophy, and religion ; not, however, as either of these is commonly understood in any mere formal or scholastic sense, but rather as representing three phases of human thought and experience which are fundamentally inseparable in the true life and development of every individual, and which can be thus understood without any special training in connection with either.

It is therefore hoped that what is here presented will enable the reader to understand *somewhat more* of the nature of Man—

and his relation to his environment and to the Universe as a Whole—than is commonly found either in science as such, or in any purely formal system of philosophy, metaphysics, or religion.

We say *somewhat more,* because by no possibility can the solution of the problem of life and consciousness be placed before any man or woman in mere words or phrases. These are but algebraic symbols—and, at best, a broken and fragmentary symbology—of what little the mind can grasp of *Realities* which lie beyond the mind—but not beyond experience—even as they lie beyond the forms of time and space in which alone the mind can express itself.

But, though the problem cannot be thus *solved,* it may possibly be helpfully stated—with the unknown factors clearly indicated. To state a problem is often half-way towards a solution. The intuition may possibly fill in what the mind fails to formulate ; and this will certainly be done whenever the soul has *experienced*—in its own inner nature, and proper manner—what the outer symbology endeavours to express.

Science, in the modern acceptation of the term, has no dealings with either religion or metaphysics ; the former being regarded as altogether outside of its possible investigations, the latter being commonly sneered at as mere intellectual web-spinning.

Yet it is quickly seen that every scientific concept necessarily begins and ends in a metaphysical region ; and, indeed, the retort has been made that scientists are, after all, only unconscious metaphysicians. Moreover, it is readily granted that no department of human thought, knowledge, or experience can really be separate from the whole ; and that if science, religion, and philosophy or metaphysics may be said to have their own particular sphere of activity, each more or less independent of the other : it must, at least, be granted that nothing which is really *true* in either of these can be antagonistic to what is true in the others.

We need in the first instance, however, a clear conception of the *nature* of truth ; and this will occupy our attention in our first chapter.

We are desirous that the reader should understand that no claim is made for any theory or theories advanced in this work other than that they are more or less in the nature of a helpful

formulation of existing knowledge, and reasonable deductions made therefrom. They are *true* just to the extent to which they are helpful in throwing some little light on the problems of life and the great Riddle of the Universe. We might even say of any mere theory, that its value lies not so much in its abstract truth as in its concrete helpfulness. It is certainly necessary that it should be true within the limits of existing knowledge, and as a statement of what things *appear* to be ; but it must also help us to further knowledge or practical achievement, otherwise it is but a barren and empty form.

Where we do not really *know*, we must be content with a working hypothesis ; where we do not actually *see*, we must endeavour to form a mental image which shall help us to further discoveries. Such is the scientific method.

Some would deny us even the possibility of knowing anything at all in certain directions. Mere Materialism goes beyond mere Agnosticism, and asserts positively that there *is nothing* to know, where Agnostics are content with asserting ' we do not know.' The materialistic position we shall have to repudiate absolutely.

To the Agnostic we hope to offer a sound working hypothesis. To the Religionist—not the mere formal religionist who is already satisfied with a cut-and-dried system — we may perhaps hope that what is herein presented may prove to be something more than a mere working hypothesis : that it may even become a *living* truth, proved in his own experience.

There are three things in the Universe the existence of which we know of beyond dispute. These three things are : Consciousness, Matter, and Motion.

With regard to the first of these it has been asserted by some that it is the *product* of the other two, and this view of the matter is commonly termed Materialism. On the other hand, Idealism commonly regards matter as merely the objectivised contents of Consciousness : thus making Consciousness the fundamental Reality, and matter more or less of an illusion when regarded as having an independent reality of its own. We shall endeavour to reconcile these extreme views, and show how they meet in a truly *Scientific Idealism.*

Now with regard to Matter and Motion, it is a fundamental axiom of the scientific conception of the phenomenal universe that these are eternal and indestructible.

The indestructibility of matter (or substance)—the qualification is important—and the conservation of energy (or motion) are the corner-stones of modern science. They possess our minds with an insistency which refuses to be displaced. They are *essentials* of our intellectual apprehension of the nature of the Universe: and we shall endeavour to show that they are the negation of all Materialism, and most positive factors in a truly *Scientific Idealism.*

As regards Consciousness, the whole question is: can we really conceive of it as being the *product* of matter and motion; as being merely a particular phenomenon, like heat or electricity?

If we cannot do this, then Consciousness must be conceived of as *something else* other than matter and motion; and, equally with matter and motion, we must conceive of it as being eternal and indestructible.

Science is commonly supposed to be ascertained or demonstrable knowledge: and so it is—up to a certain point. But the man of science is continually questioning the unseen and unknown, seeking to penetrate with his *imagination,* with the eye of the mind, that region which lies beyond the reach of his physical senses. In order to do this he must constantly endeavour to create a *mental image* of forms of matter and modes of motion in the unseen world. That mental image is necessarily, in the first place, based upon what is already familiar, and it serves as a *working hypothesis* for the discovery of new facts which, in their turn, may modify or even completely revolutionise the existing mental image.

Let us take, for example, the working hypothesis formulated by Dalton at the commencement of last century concerning the *atom* of physical matter. The mental image embodied in that hypothesis was that of an ultimate minute particle of matter incapable of further subdivision. Each of our well-known chemical elements was considered to consist of a special kind of such atoms, each special atom possessing not merely its specific and distinctive chemical qualities, but also a definite weight, corresponding to the combining weights or proportions of the different elements. This was called the *atomic weight* of the element.

All our great modern science of chemistry has been built up on this theory, which is true—so far as it goes. Up to a certain point the mental image of the atom, as a definite

indivisible minute particle, is sufficient for all practical purposes of chemistry. But for some considerable time prior to the discovery of Radium, certain physical and chemical phenomena were known which made it extremely probable that the chemical atom was not the smallest particle of a substance—in fact, that it was an exceedingly complex thing, and therefore further divisible. With the discovery of Radium this view became a certainty; and therewith the old working hypothesis—though true within its own proper limits—has had to give way to a new one, and the scientist is forced to create a new mental image of the atom. This new mental image is a very wonderful and magnificent thing, opening out an infinite microcosmic universe, an infinite *interior* conception of space comparable in every way to the infinity of macrocosmic space which we sense when we look *outwards* to the universe of Suns, and Planets, and Worlds, and Systems without end.

A working hypothesis, then, may be true within certain limits, and may even be presented as a dogmatic form of truth—*so long as its limitations are recognised.*

Now it is precisely as a working hypothesis that we would present the present work to our readers; and if any statements made herein may appear to be of a dogmatic nature, it is to be hoped that it will be understood that they are so only as legitimate deductions from given premises, and not in any sense as final statements of Truth.

Sooner or later in the evolution of the individual there comes a time when the mind and intellect revolts against the limitations of authority and convention. Nothing that is *living* can remain long in a fixed state; such a state, indeed, being the equivalent of stagnation and death, not of *life,* which is essentially movement and expansion. In proportion as systems of thought or religion become fixed and hardened, so surely do they die.

Infallible systems of truth, religious or philosophical, are like infallible systems of breaking the bank at Monte Carlo: tested in the long run by human experience they are one and all found to be inadequate to achieve the result for which they profess to exist. That is not to say that they are not useful in their way, or that they may not give to many individuals a good run for their money—a considerable equivalent of excitement or emotion, and even a temporary

success; while they will certainly give what, after all, may be said to be the main thing in evolution, namely, experience.

Doubtless if *all* the factors which go to determine any and every spin of the roulette wheel or deal of the cards, or even a preponderating proportion of these, were known: we might have an infallible system of breaking the bank. Likewise, if we knew *all* the factors which are concerned in the production of the phenomenal universe, we could explain any single phenomenon in all its relations and proportions —which is equivalent to saying that we could explain the universe from top to bottom, and should, therefore, have an infallible system of Truth.

But nothing is more certain than that we do *not* know all the factors; and so, failing this, your infallible system is compelled to give a *name* to some one or more of the unknown quantities, and to assume that thereby its *nature* is adequately explained.

This may be, and indeed commonly is, sufficient for the individual up to a certain point. There is no authoritative system too absurd or superstitious to lack some adherents. We are intellectual and spiritual children first, before we are spiritually full-grown men. It apparently takes ages untold to evolve the full-grown spiritual man; it being nothing less than this which lies at the root of the whole evolution of the Human Race. And because the individual is a child first—not physically merely, or in any one particular life, but through long periods of the childhood of the Race—so the Race as a whole, and also the sub-race, the nation, the tribe, or the community, must pass through that preliminary stage when authoritative guidance is a necessary part of training for the later stage when the man becomes a law unto himself.

Sooner or later the child must grow into the man. Sooner or later the authority to which he has hitherto submitted—unconsciously at first, and with more or less willingness or revolt in the second stage—must be tested and approved by his own judgment, or altogether rejected and set aside. This is true—sooner or later—of every kind of authority, whether parental, communal, or in matters of reason, belief, and conscience.

In the third stage, the man definitely takes his nature and destiny into his own hands. He commences to do what no

one else can really do for him : he commences to work out his own salvation.

In doing this, the test which he brings to bear upon the authoritative systems which have hitherto been offered to him as the solution of the problem of his own nature with which he is now face to face, is simply the test of his own experience. No other test really exists for any one.

Not necessarily, however, not by any means merely the conscious experiences of his present physical life, but experiences and intuitions welling up from the deep unfathomable subconscious parts of his own nature—the fruit of many lives, of many incarnations; the experiences not merely of a particular individual thread of consciousness linked by memory, but also of a larger consciousness on a higher Plane, embodying the experiences of individuals, and families, and tribes, and races long since buried in the oblivion of the past so far as history is concerned : yet active, living, potent, in every cell of our bodies, and assuredly present with us as *faculty*—and possibly also as memory in a higher self—causing the *instinctive* use and adaptation of our physical organs, and the *intuitive* acceptance or otherwise of certain matters which belong more especially to the inner subjective nature, to the mind, soul, reason, and conscience.

The more we think, indeed, of the causes which have made each individual what he is to-day, the more we find that each individual has affiliations which link him with the whole past. Even physically there is a continuity of germ-plasm and protoplasm which goes back to the very commencement of life on this globe. Where, then, did the present individual commence his experiences—those experiences which enable him to *be* what he is to-day ? What makes him an individual at all : something, namely, separate and distinct ? The more we come to examine these and similar questions, the more we shall find that our artificial distinctions, based upon the mere appearance of things, break down ; and the individual must ultimately claim not merely his relationship to the Whole, but his *identity* therewith.

Thus the individual, in the search for the *reality* of his own life and consciousness, finds that reality ever appearing to evade him, because it always lies in something further, something greater, something yet to be attained. And in proportion as this is realised, he must necessarily revolt against any and

every system which would *limit* him: either in the past, the present, or the future.

Now it would appear that at the present period in the evolution of our Western Races, a very large number of individuals—though perhaps not yet a preponderating proportion—have arrived at this third stage of intellectual and spiritual manhood which we have just sketched: the stage at which nothing can be accepted on mere authority.

The intellectual, and even the religious thought of to-day is largely marked by a revolt against authoritative systems and dogmas which one hundred years ago passed almost without question. This state of things is bound to overtake sooner or later every system as a system, simply because as such it is a *materialised* thing. Thought, life, consciousness, are subtle, fluid, progressive; matter, form, dogma, are inert, cumbrous, restrictive. The life, growth, evolution of Humanity, can never long remain fixed or materialised in any particular form; it enters into and flows through all, but will not be restrained or condemned of any. History and the records of the past are strewn with the dead carcasses of authoritative systems which once exercised undisputed sway; and our present systems, wherever they endeavour to limit and restrict, can only meet with the same fate. History will doubtless continue to repeat itself, for the same Principle is ever working therein.

But it is necessary to note here that along with the present revolt, deeply underlying it, indeed, as the *cause* of it, is the larger intuition of a Truth not embodied in the present dominant system: or rather, not expressed in the present authoritative *form* into which that system has been hardened by ecclesiastical authority.

A very large number of individuals at the present time have become more or less conscious of a spiritual truth as to their own nature which is the very antithesis of Materialism on the one hand, and of Supernaturalism on the other. The God within them has awakened; the 'crawling worm' theory of man's nature can no longer hold them in bondage; they are becoming conscious of their own inherent and inalienable divine nature.

Intellectually it is seen that all science and all philosophy tend more and more to correlate and unify *all* phenomena and *all* Nature, both subjective and objective; and the immediate deduction which we must make from the funda-

mental principle of the Unity of the Universe is, that our own nature, in all its heights and depths, in all its relations and proportions, is *one* with that Self-Existent Reality which must necessarily lie at the Root of all things; that Principle—by whatever name IT may be called—which IS the Universe.

This truth is not merely expressing itself intellectually in our literature: it is being *realised*—made a *living* truth—with ever greater intensity in the inmost nature of those to whom we refer as having passed the spiritual-babe stage. In some cases it is even thus realised before it is apprehended with any intellectual clearness; and in the effort to formulate it into a more or less logical system it is sometimes grafted, with more or less success, on to some older and more authoritative system.

But, in so far as this is sought to be done, the deeper truth which is thus dimly apprehended is almost bound to stultify itself. You cannot hang a universal truth or principle upon any particular peg or *ism*. You cannot put new wine into old bottles. You cannot shut up in any individual *form* that which lives and moves in all.

The realisation of the oneness of the individual self with the Universal Self, with the Life and Consciousness which moves in ALL, is the keynote of the higher Truth which is now being realised in so many ways, in so many streams of thought all tending in the same direction and to the same result—a higher knowledge of the Self and its powers.

This modern trend of thought has sometimes been referred to as "The New Mysticism."

We may give what name we like to the Universal Self, to that Ultimate Reality in and by which all things exist, and live, and move, and have their being: and we may try to hang this ultimate truth on some particular peg—perhaps it is only by doing this that some can realise it in any degree at all—but whatever be the name or form given to it, the *principle* which underlies any possible form in which it can be stated must always be one and the same. It is this *principle*, rather than any particular form, which we shall endeavour to elucidate.

Many writers are writing about it to-day, some from one point of view, some from another. Those who read and understand are an ever-growing number. Moreover, we are learning more and more to realise in action our real powers: the hidden, deep, unsuspected powers of the inner man, the power of human

thought and will. And even as science has now discovered some of the hitherto unsuspected inner forces of the atom of physical matter, so also science itself is discovering that behind the conventional man—ay, even within our very bodies—lie potencies and powers deep and strong as the Infinite Itself. All the Cosmic Powers of the Universe are Man's, did he but know how to utilise them.

They are more than *his*, they are *Himself*.

Whether a popular religion can ever be scientific and philosophical, may perhaps be questioned. Any attempt to bring down to a low level the highest achievements of human thought—not to speak of the transcendent insight of the seer or mystic—must inevitably be more or less of a failure. The history of all religions is a standing witness to this. Superstition survives, or re-asserts itself, even on the very foundations laid by the highest teachers the world has ever known.

Nevertheless, it is not wholly beyond hope that, in an enlightened age, Religion may be, nay must be, scientific in so far as nothing which is known as scientific fact shall be found to be antagonistic to it, and philosophical in so far as it shall be rational and logical instead of authoritative.

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CHAPTER I

WHAT IS TRUTH?

"There is an inmost centre in us all
Where Truth abides in fulness, and around,
Wall upon wall, the gross flesh hems it in,
The perfect clear conception which is Truth."

BROWNING.

CHAPTER I

WHAT IS TRUTH ?

In all ages men have sought for Truth, and have found it in greater or lesser degree according to their individual needs ; and have suffered and fought and died for the measure of truth which they have found.

Truth is the inspiration of life in all its modes and aspects ; it makes of life a noble reality, and leads us ever to a wider and deeper knowledge of our own nature ; to a fuller and more perfect realisation and expression thereof.

All that is permanent and enduring, all that is worth striving for or living for, all our hopes and aspirations, ay, and also our doubts and fears, are summed up in the one word—Truth.

Truth, Goodness, Beauty : these find expression in human life as the highest and noblest qualities and attainments, as knowledge, conduct, art, religion.

The highest aim of all life, of all art, literature, science, philosophy, or religion, is to seek truth and perfection, so far as may be possible ; to seek to know truth, to express it in beautiful forms, and above all to understand how to *live* it.

Those whom we recognise as the greatest of our race are those who have given to us by their lives and teachings some large measure of truth ; those who by their genius, inspiration, or example have placed before us some wide and far-reaching revelation of the fundamental realities of life and consciousness, of that which can give permanent satisfaction to our deepest nature, in contradistinction to those transitory and impermanent appearances under whose illusion human nature is so prone to fall.

Truth is the foundation of science, the aspiration of philosophy, the inspiration of religion. There is no possibility of human thought in any direction without truth.

This is the one thing, perhaps the only thing, in which all human thought is in absolute agreement, namely, that, underlying all phenomena in the external world, and in our own life and consciousness, there is a permanent Reality, an infinite, everlasting, abiding Truth.

To know that Truth is the deepest necessity of our nature; it is the goal to which all things move. It is both the outward necessity and the inner compulsion of life in all its forms. In our outward circumstances, in all that makes for welfare, progress, and happiness, the knowledge and practice of truth is the essential condition. It is only by and through truth that life can be harmonious, that it can be pure, free, joyous, and expansive.

Truth is the sunshine of life. Where truth is absent, life is stunted and dwarfed, and its accompaniment is pain and suffering.

But the inner necessity, the deep compulsion of our nature to seek the truth, is something infinitely more than the pressure of mere external circumstances, something more even than a search for happiness or a desire to enjoy to the full the wine and the sunshine of life. Men can put these aside, and sacrifice everything which this life has to offer, for the sake of truth.

The inner compulsion exists even in the lowest forms of life. It is the spontaneous evolution of life itself; that mysterious *something* which is ever moulding, organising, and adapting matter—with its associated forces—in order to evolve, to body forth, as it were, in the outer world, a more and yet more perfect representation, image, reflection, or expression of its own inherent, inexhaustible inner nature and essential prerogative—the *creative* power of the Self within.

The search for truth, then, is the search for the underlying and permanent reality of things. It is the effort of the *self* to know and establish its fundamental relation to that external objective world which appears to be the not-self; and, in doing so, to realise its own inherent nature and powers.

It is evident that if things were in reality what they appear to be, there would be no need to search for truth; and this search, therefore, so soon as it becomes a conscious, or self-conscious effort, is, in the first instance, an endeavour to

penetrate beneath the mere appearance of things, and to understand them in their proper relation and proportion.

But, although this fact, that the objective world is only an appearance, is so self-evident, nothing is more characteristic of human thought and action than the assumption not merely of reality in the phenomena of the senses, but also of finality in our common concepts of these phenomena. This is not merely the case in everyday life and action, where indeed such an assumption is both necessary and legitimate, but it prevails and dominates almost entirely in the region of scientific speculation and authoritative religion. In the former it is seen in the effort which is made again and again to explain the universe from top to bottom—including life and consciousness itself—on the basis of mechanical principles deduced from the laws of mass and motion which are applicable to matter in its physical form. In the latter it is seen in the violent and arbitrary separation of the *natural* from the *super-natural*, and in teachings about the origin and nature of the cosmos and of man which are based upon the crudest form of realism.

There is, in fact, a constant tendency in every department of human thought to assume that things are in reality just exactly what we represent them to be in our mental concepts or picturing of them.

The first step, therefore, towards an understanding of Truth, is a clear perception of the *relativity* of all phenomena; or, in other words, an understanding of the limitations under which these phenomena are cognised, and consequently of the limitations of the concepts which we are compelled to form of them. These limitations are in every case due to the nature of the organism through which the thinking Ego or Self is compelled to act. In exceptional cases these limitations are found to be transcended in some one or other particular direction; and it is principally by a study of these exceptional cases that we may come to understand the larger and transcendental powers of that true Self whose nature is so largely masked, rather than disclosed, by the physical organism.

Let us endeavour, in the first instance, to form a definite and clear conception of what is meant by the term *truth*.

The question, what is truth? can be answered much more readily than the question, what is true? The term *truth* is

often used in a general sense to cover a number of categories, such as: facts, opinions, theories, appearances, realities, etc. But when we speak of *truth* in the abstract, we do not mean so much—or hardly at all—mere facts, as the deductions or generalisations which we make from those facts. All truth must be founded upon facts, these being, as it were, the material basis of truth. Facts are true, but they are not truth, for though we deduce truth from facts, it is at root the truth itself which gives rise to the facts, and not the facts to the truth. Facts may thus be said to be the objective side of truth.

But we may be perfectly well agreed as to a certain number or class of facts, and yet we may make deductions therefrom which are quite antagonistic to each other. Thus arises the conflict of one opinion with another.

Again, we may make deductions from a certain number of facts, and those deductions may be perfectly accurate so far as those particular facts are concerned, but may be quite inaccurate or inadequate in relation to a larger number of facts bearing upon the same phenomenon. Thus a statement may be true within certain limitations, but false outside of those limitations. This is clearly illustrated in all the methods of science, and the advance of scientific knowledge. In dealing mathematically with certain phenomena it is necessary and legitimate to assume certain limitations within which the formulæ are applicable and accurately true. Outside of those limitations, however, the truth must be stated in other terms. Further than this, new facts are constantly coming to light which necessitate a re-statement or abandonment of previous theories and deductions. Up to the point of the previously known facts, the old theories were a sufficient statement of truth, inasmuch as that truth or generalisation covered all the known facts. But with a wider knowledge of facts comes a wider or deeper generalisation or statement of truth.

Again, a statement may be true as appearance, but not true in fact. There are many statements which we make as a conventional form of language which, however, are not true as real expressions of the facts of the case. Thus we say that the Sun rises and sets, implying that there is a motion of the Sun round the Earth; whereas the real fact is that the appearance of rising and setting is due to the revolution of the Earth on its axis. Or we speak of a thing

as having a certain colour, as if colour were something in itself which could be given to or taken away from the thing; whereas colour is due to the property which an object may possess of absorbing or reflecting certain rays of light, and, *quâ* colour, is purely a subjective effect in our own consciousness. If I say of a rose that it is red, I am describing it relatively to my own consciousness, acting through my physical organ of sight. To an eye differently constituted the rose might appear to be quite a different colour. The language in which we usually describe things is only true by a more or less common convention, arising from the fact that, to the large majority of our fellow-beings, objects in the external world present the same appearance, or have a similar effect in consciousness. Our language is the expression of a *common-sense*, it is only true relatively to the common appearance of things, due to the possession by every individual of a similar set of senses, and more or less similar mental associations. These latter play a large part in our common conceptions of things, and even in our recognition of objects. A European going to India for the first time will find it difficult to distinguish one native from another, because the type of face is different from that to which he has been accustomed. All faces appear to be alike, and it is only after some months, when the necessary mental associations have been formed, that distinguishing differences can be recognised.

Thus the fundamental fact is not that a thing *is* so and so, the fundamental fact is the fact of consciousness, the fact that things are represented in a certain manner to consciousness working in or through a certain physical organism.

This latter aspect of truth is a very wide and important one, because it leads us directly to the great question as to how much of the external world is mere appearance, and how much is reality; in other words, what is the real and true relation between the subjective and the objective, between consciousness and that of which it is conscious, between the I and the Not-I.

We shall have to deal with this question more fully later on, but in the meantime we may note that it is very evident that, so far as external phenomena are concerned, we do not see or know anything as it really is, but only as it is limited by our physical senses. Given a different set of senses, or an extension of the range of our present senses, and the world

would have for us a totally different appearance. Thus everything in the external world, everything which we are conventionally accustomed to accept as true, which we are accustomed to regard as the *real*, is appearance merely. All that we actually know, all that is actually true in our experience, has a limited and merely relative value. It is only true in *relation* to something else, never absolutely so. The absolute truth of a thing would be its relation to everything else ; it would be a statement of the nature of the thing beyond which no further statement could possibly be made, because there would be nothing left in the universe to which we could relate it. It would be the ' thing in itself,' if indeed there can be any such *thing*.

To know the full and complete truth about anything, we must know it in all its relations and proportions. But such a knowledge, the knowledge of absolute Truth, implies a knowledge of the whole Universe. To know the absolute Truth of anything, even of the smallest atom of matter, is to know that Infinite Self, by whom, through whom, and in whom all things eternally ARE.

From the foregoing considerations, therefore, we shall see that we may define *truth* as : *the clear perception of the relation and proportion of things*.

All knowledge being thus necessarily relative, we may classify the facts of our life and consciousness in their relationship to one another, and to the Whole, in three main divisions or aspects :—

(*a*) The relation which exists between things in the external, objective world.

(*b*) The relation of the objective world to our own consciousness—to the subjective self.

(*c*) The relation of our individual consciousness or self to the Permanent Reality, the Root Principle, or Noumenon of the Universe.

These three aspects correspond broadly to the three great departments into which human knowledge and experience is usually divided, namely : to science, philosophy, and religion respectively. Each of these has its own appropriate field of experience, and methods of research. Each deals with a certain class of facts which may be considered in a more or less independent manner, and each may state the deductions from the facts with which it deals in terms which are more

or less foreign to the others. But we must be careful to note that there is no arbitrary line of division between any of these, and that the highest truth must include them all.

Unfortunately, science, philosophy, and religion have come to have a certain arbitrary, conventional, and limited meaning attached to each term, as if they had no connection the one with the other. Ecclesiastical authority in the early centuries of the Christian Era made religion amongst the western nations synonymous with super-naturalism. By doing so it divorced religion from philosophy and science, and for long centuries the Church has bitterly opposed the growth of knowledge and the progress of truth outside of its own narrow and dogmatic pronouncements. Nor does ecclesiastical authority to-day present in this respect other than a somewhat curious spectacle of a vain endeavour to cling to old traditions and authority, and a fruitless effort to stem the rising tide of knowledge which threatens to wash away the very foundations of a long-cherished edifice of supernaturalism. Happily religion is finding another basis, and other representatives, who have recognised that the highest religion is also the highest science and the highest philosophy, and that one truth cannot possibly be antagonistic to another.

During the latter half of the last century the rapid progress of scientific knowledge, and the traditional attitude of the Church towards it, caused a reaction and a revolt against religion itself. The representatives of religion had nothing to teach but supernaturalism, and the representatives of science denied that there could be such a thing as the *super*-natural. Many of the foremost intellects of the day were in open antagonism to all forms of religion so called, and took refuge in blank denial and materialism. Science came to be almost synonymous with materialism, but that phase was happily of short duration, and though materialism has still its representatives, modern scientific thought may be said to have clearly recognised that matter and force are not the be all and the end all of the universe, and that true religion is not necessarily either supernaturalism or superstition, but has a legitimate field in the experience of the individual and the race. Science, indeed, may now be said to have recognised that there is a vast superphysical region of phenomena of the deepest interest and importance, and is investigating *psychical* phenomena which not very long ago were either wholly denied,

or regarded as mere subjective hallucinations, altogether outside the region of solid facts.

The highest truth must combine the results obtained in every department of human life and experience. The highest truth is the synthesis of science, religion, and philosophy; and each of these must, in the long run, adapt itself to the truths which the others bring to light. The growth of human knowledge, and the natural evolution of the race, carries with it ever a wider and a deeper perception of the relation and proportion of things. Old traditions and beliefs remain valid only for those who represent the particular limitations under which those beliefs sprang up.

Every form of truth represents a certain stage of evolution; and since races and individuals are widely apart in the scale of evolution, and therefore cannot see things in the same relation and proportion, we have a vast number of differently formulated aspects of that which, fundamentally, is one changeless Truth, and we have a survival in certain communities and individuals of *aspects*, the inadequacy of which have long since been recognised by the more advanced representatives of human evolution, and therefore abandoned.

Now it directly follows from the foregoing that the test or measure of Truth is its *universality*, that is to say, its freedom from limitations. It is the degree to which we can know a thing in its widest and deepest relations and proportions.

So long as we are limited and conditioned in our faculties and consciousness, and so long as there is in front of us a possibility of growth and evolution, there will always be a deeper and a still deeper truth to which we may attain, a clearer and more perfect perception and conception of the real relation and proportion of things, and a greater and still greater freedom from the limitations of appearances.

The deepest Truth, the One Truth, the final Truth, is that permanent underlying Reality or Noumenon, in which, by which, and through which the whole Universe eternally IS.

Science, philosophy, and religion alike acknowledge this One Reality, the cause and source of all things, though they may differ widely as to Its nature, and Its relation to the phenomenal world and to human consciousness. Science studies its manifestations in matter and force, and recognises Its truth and permanency in the invariable laws of nature. Philosophy or Metaphysics studies It as Consciousness, as the

relation of the subjective to the objective. Religion deals with It in the instincts and emotions which lie so deep in the soul of man to know and apprehend a Supreme Intelligence and a Divine Power, or a Personal God.

Thus in every department of human thought and experience, it is only by and through a conception of the universe as an Eternal Verity, that the search for Truth, which is such a deep necessity of our nature, is possible at all. That the Universe can be otherwise, that it can be a lie and a delusion, is simply unthinkable. Lies and delusions do not exist in reality, cannot exist in that Consciousness which sees and knows everything in its proper relation and proportion as the necessary and inseparable part of the great Whole. A lie and a delusion is simply a false representation of a thing. It does not make the thing so represented false in itself. It is a thing seen out of proportion, imperfectly or partially, or through a medium which colours or distorts. Everything is true in its proper relation and proportion, even that which we call evil.

And because all things are true in their proper relation and proportion as part of the great Whole, truth must be the absolute necessity of our life in all its stages and all its relationships. Let us realise that the search for truth is no mere dream of the Philosopher or the Saint, is no mere quest of an ideal which perchance does or does not exist, but it is the hard practical necessity of life itself, from which we cannot escape. Every living creature, from the lowest to the highest, must give a practical answer to the great question, 'what am I?'—by living; and according to what the answer is, from moment to moment, so will the individual life express itself in the external world of form and action.

Each and all, whether consciously or unconsciously, is bound to answer the great question in some manner or other, is, indeed, answering the question at every moment, simply because each is a *life*, indissolubly connected in his inmost nature with that Infinite Life which is not merely the source, but also the goal and the summation of all things.

Each of us, then, by the very fact of life, is compelled to form some theory of life, however unconsciously, or however crude or incomplete that theory may be; and each one of us does, from moment to moment, act upon and regulate his life by that theory, whether we may have actually

formulated it to ourselves or not. The life which we live is the answer which we give to the great question, 'what am I?'; and our welfare now and in the future is entirely dependent upon whether that answer be a true or a false one. If the answer be true, if it be in harmony with the laws of our nature at our own particular stage of evolution, we shall find room for growth, expansion, happiness, to the fullest extent which we may demand; we shall get *life*, and get it more and more abundantly. If we know how to ask these, we shall certainly receive, for the knowing how to ask is the knowledge of natural law, in the inner or spiritual world as well as in the outer material. In other words, it is the knowledge of Truth. But if we know not how to ask, if we are untrue to our own nature, or false in the answer of the life which we live: then we shall meet with suffering and pain, we shall be checked and thwarted, so that at last we are compelled to turn aside from the falsity of our lives.

All life is a question and an answer; a question in the within, an answer in the without. It is the great question of the self within—'what am I?' Unconscious or instinctive in the lower forms of life, self-conscious in man, it is ever being answered in wider and deeper terms as the self within experiences and evolves. For every one, and at every stage of evolution, there is an appropriate answer, a corresponding truth. According to the stage of evolution at which we have arrived, so will be the answer which we ourselves give in the life which we live, and so also will be the further measure of truth which we can receive.

But we must seek if we would find; there is no other law of growth and evolution. Each man obtains—in the long run—just exactly what he seeks.

> "Higher than Indra's ye may lift your lot,
> And sink it lower than the worm or gnat."

"Whatsoever a man soweth, that shall he also reap." To reach the light, to acquire the power of clear sight, to see things as they are, a man must seek the light, persistently, continuously, through many lives. The field in which he sows and reaps is boundless and eternal. The sower and the reaper is the same immortal Self. To one life the sowing, to another the reaping. There is no miracle of growth or transformation of the inner man any more than of the outer.

The seed must be sown and watered before it can spring up. It must become "first the blade, then the ear, then the full corn in the ear." And whether we sow wheat or tares, the law is the same.

"See yonder fields,—
The sesamum was sesamum, the corn
Was corn. The silence and the darkness knew,
So is a man's fate born.

"He cometh, reaper of the things he sowed,
Sesamum, corn, so much cast in past birth;
And so much weed and poison-stuff, which mar
Him and the aching earth."

The Universe is an Eternal Verity, and the whole Truth, the full, complete and final answer is written large before our eyes, in the infinitely great and the infinitely small, in the common-place facts of our life and experience just as much as in any 'miracle' that could possibly be wrought, had we but eyes to see and an understanding heart. For Truth is not what has been, or what will be, it is what IS. It is the Eternal Changeless Reality which underlies all appearances.

If, then, we are seeking for Truth in its fullest and widest expression, we must accept all facts, all phenomena as true, in their proper relation and proportion to one another, and as part of the great Whole; for all phenomena, rightly understood, that which we call evil as well as that which we call good, are part of and essential to that fundamental underlying Unity by and through which alone the Universe can be conceived of as a Cosmos and not a Chaos.

And the measure of truth which we have apprehended will be just exactly the extent to which we can recognise the existence of *Universal Principles* underlying all phenomena. It will be the extent to which we can recognise the universal in the individual, the One in the many.

Science, philosophy, and religion are all agreed as to the existence of this fundamental Unity, but differ greatly in their apprehension or formulation of it, because each considers it from a special and limited point of view. Broadly speaking, science deals with it in terms of matter and force considered dynamically; philosophy endeavours to express it in terms of consciousness and pure reason; and religion in terms of a

Supreme Being. Each of these, if true in its presentation, should be a necessary and integral part of the whole Truth, mutually corroborative and interdependent, for each deals with one particular aspect of the fundamental and essential Unity.

That the workers in each of these departments of human knowledge are not in harmony at the present time, we know full well ; and the seeker after truth is often sorely perplexed with the confusion and conflict of one so-called *truth* with another, even to the point of abandoning all hope of finding any truth whatsoever. Yet the darkest hour of doubt is often nearest to the dawn, and there is always light enough for the next step. Let none ever despair, or turn aside from the great Quest. In an infinite Universe of law and order there can be no such thing as failure in any direction in which effort is made. Our apparent failures are necessary lessons. We often learn more by failure than by success. The only real failure is to cease to endeavour.

Is there not, indeed, enough truth already plainly disclosed in the workings of nature, on the page of history, and in the teachings of the world's greatest and noblest, to give us an infinite measure of *faith*, where as yet we do not know, or where we perceive but dimly ? Shall we deliberately close our eyes to the light which we already have, because that light seems perchance to be so small or so obscured ? Shall we get more light otherwise than by growth of that faculty which already perceives the light, and will that faculty evolve otherwise than by natural law ? Will it come otherwise than by that process by which we have reached our present powers—the process of experience ? Others have more powers than we have, even to a divine degree, and what is theirs may certainly be ours, even to the divinest degree, for are we not all ' Sons of God ' ?

And if, looking outwards at the changing world of phenomena, we realise more and more definitely the littleness and vanity of mortal life, its pains and its illusions, is it not also true that, looking inwards, looking beyond the mere appearance of things, we realise with ever-increasing certainty the illimitable possibilities and depths of our inner, immortal, and true nature, even to its oneness with the Infinite and the Eternal ?

Science, philosophy, and religion, rightly understood, should and do combine to give us the fullest and most definite

assurance of a fundamental permanent Reality underlying all phenomena, all mere appearance; an unchanging and unchangeable Truth by and through which all things are what they are. Could we but realise this Truth in our life and consciousness, it would be to us the end of all doubt and of all strife, for it would be the realisation of our own inherent and inalienable divine nature, the realisation of the Infinite Self, the attainment of which is the end and goal of our evolution.

Science and philosophy can and do give us a clear intellectual apprehension of the necessary unity of the Universe in all its manifestations as matter, force, life, and consciousness; of the essential and necessary existence of a permanent and substantial Noumenon of all phenomena. Every manifestation, every individual object or form is dependent upon and linked to that permanent and indestructible Noumenon, not merely by some sequence of cause and effect, but it is at every moment directly dependent upon it, being in very fact, in its last analysis, none other than that Noumenon Itself; whilst its phenomenal appearance is an *aspect* of that Noumenon. It is the One seen partially and incompletely.

In every form, in every phenomenon, there is a twofold aspect or element, the one impermanent and transitory, the other permanent and continuous. The first is its aspect as form, the second its existence as substance.

Every form, *quâ* form, is dependent upon a sequence of cause and effect, going back in an unbroken catena to the illimitable past. At every moment the form changes, it is the product of a continuous flux or transition. In our consciousness that transition may appear to take place more or less slowly or quickly, the form may persist for a longer or shorter period of time. That which any particular form appears to be at any particular moment, is, at one and the same time, both the effect of the past, and the cause of the future.

In looking at things in this aspect, which is the one we commonly employ, we use two conventions of language, neither of which is true. In the first place we commonly speak of the present, whereas in truth there is—in this respect—no present, but only past and future. For no sooner have we said 'now,' than it has already become the past, and 'now' is nothing more than an arbitrary mathematical line of division between past and future, and, as such, has no dimensions whatsoever.

In the second place we speak of a beginning and an end, whereas there is in truth no beginning and no end, save in appearance, for there is no break in the line of sequence of cause and effect. All that is at any one moment, implies the whole past, and involves the whole future; but not necessarily, indeed by no means, the whole past and the whole future as we understand past and future.

Thus all forms are doubly deceptive: they give us a false conception of the present, and lead us to think that it is only this pseudo-sequential-present which is the reality; and they give us a false idea of separation and discontinuity in things, they lead us to isolate phenomena, to limit them in a more or less arbitrary manner, and thus to endow them with a false relation and proportion.

If, however, as a concession to our conventional methods of speaking and thinking, we are compelled to postulate that there must have been "in the beginning" an efficient First Cause for all that exists, it still remains true that that First Cause can be none other than that Infinite Eternal Principle which is the Noumenon of all that exists.

But if we can act in consciousness in another direction or dimension, as it were, to that which we normally employ; if instead of fixing our mind on the horizontal line of sequence of cause and effect in *time*, by looking backwards and forwards, we turn our attention in a direction at right angles, so to speak, to our normal consciousness, and look *into* things, we shall assuredly find there, in the inmost of every form, in every atom of matter, as in our own mind and consciousness, that abiding permanent Reality which is not what has been, or what will be, but what Eternally IS.

The difficulty of doing this does not lie in what things *are*, it lies in the limitations of our own mind and consciousness. The Truth, the full and final Truth is always *there*, could we but perceive it. Along the horizontal line of cause and effect, the false or imperfect dimension of consciousness, we shall seek in vain for any finality, for any 'First Cause,' or any final goal, for there is neither first nor last in Reality, and Truth in this direction is ever retreating to an infinite distance. If along this line we make Truth dependent upon historical events, then we are in the worst possible plight, for we see these events retreating further and further into the 'past,' becoming ever more and more

difficult of demonstration, becoming less and less realisable and credible.

But in the vertical direction, the true plane of consciousness, the interpenetrative plane, Truth is untouched by time. Its symbol and mode is space, not time; space, *in* which all forms exist, yet which is independent of any; which is the innermost of the inner, as well as the outermost of the outer, and which we must conceive of as existing though every form therein should perish. In this direction or dimension of consciousness, Truth is not removed to an infinite distance, it is infinitely near, and our search in this direction leads us ever nearer and nearer to that "inmost centre where Truth abides in fulness."

That centre is everywhere, and *we* are always at that centre, could we but realise it in our mind and consciousness. Wherever we move we carry that centre with us, for we *are* that centre. Even with our present consciousness we never conceive of ourselves otherwise than in the centre of abstract space. The concrete idea of position in space is purely a matter of relation and proportion among phenomenal objects.

It is the province of science and philosophy to help us to understand and realise these truths, by tracing out for us both the horizontal line of sequence in cause and effect, and the vertical line of direct relation to the Noumenon, and enabling us to formulate them as demonstrable knowledge. Science demonstrates to us the horizontal line of cause and effect in what is known as 'natural law.' It also endeavours to follow up the vertical line, in its efforts to get behind matter, to penetrate to the root of matter and discover its fundamental basic constitution. But in so far as in doing this it isolates matter, and makes of it an independent reality altogether apart from consciousness, it is only dealing with phenomena. The Noumenon lies in consciousness, in the Self, not in that which the Self creates.

But knowledge, the intellectual apprehension of Truth, is one thing, the practical realisation of it as life and consciousness is another—it is Religion.

Science and philosophy are necessary to formulated religion—though formulated religion commonly ignores them as a presentation of things in their proper relation and proportion—but they are not Religion itself, because Religion is *Life*—Life becoming ever fuller, richer, and more abundant;

ever realising more and more completely its oneness with the Infinite and the Eternal.

That is the root and essence of all religious, however dissimilar and even antagonistic they may appear to be in their outward forms, or however crude or superstitious they may be in their origin and development. One and all have their basis in the central fact of man's spiritual nature, of the inherent and inalienable oneness of the Self within, the immortal Self, with that permanent Reality which is the Infinite and Eternal Noumenon of all that exists.

All forms of religion are more or less imperfect attempts to state the essentials of the *process* by which that oneness can be realised more and more completely. The witness to the truth of our divine nature exists in our own heart and conscience, and is the compulsion of the supreme moral law of Love. It wells up from within, to find a more or less perfect expression in infinitely complex forms of life in the without.

And because of this eternal inner witness, religion is ever the most potent factor in human life ; it is the key-note, the fundamental undertone, supporting all life's harmonies, and resolving all its discords. Human life and history without religion, without that compelling power ever present in the heart of man, is utterly unimaginable and inexplicable.

This inner consciousness and witness of man's inherent divine nature must necessarily express itself in the outer world of forms in various ways, principally on account of the fact that physical man is the product of an evolutionary process, and that his knowledge and perception of truth, and his ability to *live* that truth, varies immensely at different stages of his evolution, in the individual, in the community, and in the race.

Forms of religion, like all other forms, are temporary and local, the product of time and place. They belong to the horizontal line of sequence of cause and effect ; they are historical and evolutionary, and as such they change and pass away.

But Religion itself, the energising power in the heart of man which causes him to seek the Truth in larger and ever increasing measure, and makes that Truth the one vital necessity of his nature, compelling him to *live* in accordance with the measure of truth which he has found—does not pass away, for it belongs to the vertical line of direct connection with the Eternal Reality.

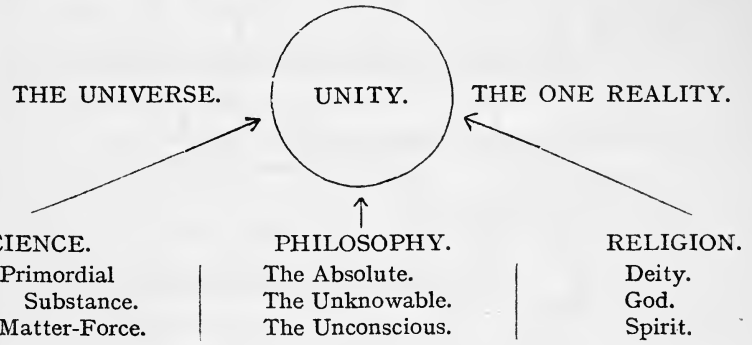
It is the ever-present witness that the Self within—the transcendental Ego-Subject—is one with the Infinite Self, by whatever name that Infinite Self—the Noumenon of all that eternally IS—may be called; or in whatever form it may be apprehended or worshipped from time to time by the individual, the community, or the race.

In all *exoteric* forms of religion that Noumenon is regarded as extra-cosmic and extra-human. It falls, together with the whole externality of consciousness—the objective world of 'matter'—into the category of the not-self, or the supernatural. But in *esoteric* religion, in all true mysticism and transcendentalism, the distinction between the self and the not-self vanishes, for it is clearly seen that that distinction is an arbitrary and illusive one, that it pertains only to those limitations which at present condition the Ego-Subject in our personal selves—how or why we have still to discover—and arises only in the limitations of that lesser self.

The conscious realisation of that oneness, the discovery of the transcendental nature of the real Self, the throwing off of the limitations of the personal self, the understanding of the how and why: in short, the realisation of the divine and infinite nature of the Self within—that is Religion, in its fullest, widest, deepest sense; than which in human nature is naught higher or nobler, and to which all things, all experience, all knowledge, and all life moves and ministers.

It is the finding of TRUTH, the realisation of Eternal Life.

We might summarise what we have now said as to the nature of Truth in the following diagram :—



It indicates, in the first place, that all streams of thought and experience lead to the apprehension of a Unitary or

Fundamental REALITY, existing Eternally as the Root or Noumenon of all things.

That One REALITY *is* All Things; and All Things *are* that One REALITY.

It must be conceived of, therefore, as a UNITY. There are not two or more Root Principles; there is only ONE; an Infinite Unity underlying that Infinite Diversity which we know as Phenomena.

This Concept, the existence of this One Root Principle, is the One Truth respecting which all are agreed. The Universe is unthinkable without it. It is, as it were, the 'point of sight' in our mental picture of the Universe; the point to which all lines converge. Without it we can have no perspective in that picture, no just relation and proportion enabling us to formulate our knowledge in that ever widening and deepening measure which is the measure of Truth—its universality.

But though the existence of this One Root Principle is beyond dispute, though it is the One Truth on which all are agreed, all are by no means agreed as to the *nature* of this Principle; as to *what* it really is, or how it should be defined.

The reason for this disagreement is fairly obvious. The moment we begin to define a thing, we must do so by relating or comparing it with something else. All our experience, all our formulated knowledge, is of the nature of such a relation or comparison. We can only know a thing, or the quality of a thing, by its opposite; and though we are obliged to postulate this One Unitary Principle as lying at the Root of all things, as indeed *being* all things: yet in reality we can only know the Universe as a duality in which everything has its opposite.

Now the great majority of people are constitutionally incapable of seeing both sides of a question at the same time —or perhaps at any time—consequently we have differences of opinion, as wide apart as the poles, as to what this One Root Principle really is. Some take it for one thing, some for another. Some side with God, or Spirit; others with the Devil, or Matter.

But when we have once grasped the real idea of Unity, of a Oneness, of a Monad, of an Atom—meaning that which is indivisible—we shall understand that this Root Principle cannot be a *What* at all. It is, so to speak, all *Whats.*

It cannot be one thing to the exclusion of anything else; or one quality to the exclusion of its opposite—simply because it is ALL.

For this reason it can only be expressed by a paradox; for of any category which may be mentioned it can only be said that it both *is* and *is not* that which is mentioned. It is the failure to recognise this which places so many systems of so-called Truth in opposition to each other.

The Infinite must express Itself in an infinite variety of forms, modes, qualities, attributes; all of which are necessarily in contrast with something else. Those who cling only to one form, to one aspect of truth merely, will inevitably miss what Browning calls, "The perfect clear conception which is Truth."

Understanding clearly this principle, understanding that truth is the relation and proportion of things, and that we must always come short of the final Truth of a thing until we have related it to all and everything else—in other words, to the One Root Principle—we shall reach a centre of equilibrium, a centre of poise and balance from which all the distracting cries of 'lo here!' or 'lo there!' can never turn us aside.

We may take our diagram as representing not merely the fact that all streams of thought lead to this One Unitary Principle, to which many and various names are given, but also as representing broadly the differences which exist between the three principal categories of human thought and experience: Science, Philosophy, and Religion.

On the one hand we have Science, which commonly ignores Religion altogether, and even sneers at the Metaphysics of Philosophy. Science deals only with the objective phenomenal side of the Universe, with Matter and Energy. All its concepts are mechanical, and must be capable of reduction to mathematical formulæ.

At the other extreme we have Religion, which commonly ignores both Philosophy and Science.

The place of balance really belongs to Philosophy, midway between the two extremes. Philosophy must take account of all human experience, not of one half only.

The terms used by Science and Religion respectively to connote the One Root Principle are more or less expressive of a partial and one-sided view. The terms used by

Philosophy are not so. They are, however, more or less paradoxical—as any definition of the ONE must necessarily be—and therefore can never be popular.

The term Absolute is simply a term for the ALL, without any colouring, so to speak.

The term Unknowable—when rightly understood—may stand for the paradox that though the ONE is all that we can possibly know, and all that we can possibly know *is* the ONE: yet to know that ONE in its entirety would be to know nothing; simply because all that we call knowledge, being a matter of relation and proportion, when ALL is known all relation and proportion must cease—there is nothing else to relate it to.

In the same manner, the term Unconscious is a paradoxical expression for the fact that Absolute Consciousness must be Unconsciousness. Consciousness is essentially the relation of Subject to Object. But in Absolute Consciousness Subject and Object become ONE—and therefore both vanish.

Perhaps if we might hazard a guess as to why the phenomenal universe exists, as to why the ONE apparently becomes the many, it would be just for this very reason, that an Infinite Subject requires an Infinite Object whereby to know Itself.

All knowledge is at root self-knowledge. We shall never find the ONE anywhere than within ourselves. We realise our own inner nature and powers by our outer experiences, by what we term *life*; and as our objective experiences become wider and deeper, and more and more complex, so also must our realisation of the Self within.

The final truth is the recognition of the oneness of the individual self and the Universal SELF; the oneness of all Life and Consciousness in the within, as in the without.

There is naught to know beyond that.

The individual consciousness which we conventionally know as *ourselves* may grow and expand from power to power, and from knowledge to knowledge, even to the attainment of what may now appear to us to be the measure of the stature of the Divine Itself. Yet in reality the Divine and the Human are only terms of comparison; and perchance when we have reached to the fullest measure of attainment of that which at present appears to us to be divine, we shall still find possibilities of further evolution—even to the endless end.

Man is as necessary to God as God is to Man—and in reality the two are ONE.

My individual particular nature, and your individual particular nature—equally with that of every individual particular 'thing'—must be referred back to the One Infinite Reality as its ground and basis. It can have no existence or explanation save in *That*. But as we trace it back to *That*—from stage to stage, if you will, though in reality there are no stages—the limitations which make it an individual 'thing' must gradually fall away, so that in the end we perceive nothing but the Infinite Itself; that Infinite which is the "inmost centre where Truth abides in fulness."

CHAPTER II

MATTER AND SUBSTANCE

" It seems probable to me that God in the beginning formed matter in solid, massy, hard, impenetrable, movable particles, of such sizes and figures, and with such other properties, and in such proportion to space as most to conduce to the end for which He formed them ; and that these primitive particles, being solids, are incomparably harder than any porous body compounded of them ; even so very hard as never to wear or break to pieces ; no ordinary power being able to divide what God Himself made one in the first creation."—Sir Isaac Newton, *Opticks*.

CHAPTER II

MATTER AND SUBSTANCE

THE most common and obvious fact of our everyday consciousness is the existence of *matter*.

So common and obvious, indeed, is this fact, that nothing save matter appears to possess any reality for the average human being, nothing would appear to be further removed from the region of mystery and conjecture. Probably not one person in a thousand has any conception that matter is not what it seems to be—simply matter; perhaps not one in a million has ever realised that the mystery of matter is as great as that of his own soul, and that every atom of matter—could we but penetrate to its inmost recesses—contains the key to the whole riddle of the universe.

Ask 'the man in the street,' what is matter? and he will probably stare at you, and take you for a more or less harmless lunatic, or at best think that you are joking. But if you can succeed in persuading him that you are really in earnest, and indeed most anxious to have his opinion, what answer do you suppose he will be able to give you, save that matter is—well, just matter.

It is only quite recently, indeed, that the most learned scientist has been able to give any answer which is substantially different from this. It is only quite recently that we have been able to say, with a fair amount of certainty, that matter can be traced to a deeper region, that it is not something *sui generis*, but a derived or evolved product of something else, and that at a certain stage it ceases altogether to be *matter*, in the physical sense of that term.

Now if we are unable to trace matter any further back than itself, that is to say if we were unable in our ultimate analysis of it to derive it from something which is not matter, it is obvious that we should be unable to define it or state it in any other terms than that of its own nature and properties,

and those properties only such as we could cognise with our own limited faculties; our definition being, in fact, altogether empirical, and dependent entirely upon our sense perceptions.

Now we know that our sense perceptions are exceedingly limited in their range, and that matter must have a great many properties of which we have no direct cognisance, but which may be more or less inferred from its interactions in various phenomena. Indeed, if the question is thought out to its full extent, it is readily seen that though matter, *quâ* matter, must have a limited number of properties, in so far as at a certain point in its analysis it ceases to be matter altogether, yet *quâ substance* it must have an infinite number of properties, in so far as it must have its root in, and must be a factor or aspect of, that permanent Noumenon, that fundamental Reality which makes an Infinite Universe possible, because nothing in the Universe can ever be separated—save in appearance—from that Ultimate Reality.

The question as to how far back we should have to carry our analysis of matter in order to reach that *Noumenon* is an open one. Two things, however, we may say for certain; firstly, that long before that Noumenon is reached, in fact at the very next remove, matter ceases to be matter at all, as we know it, that it has lost every quality which characterises it as such to our physical senses; and, secondly, that the ultimate question is a purely metaphysical one, that it concerns mind and consciousness, as well as matter.

Since it is our consciousness which cognises matter, or let us say, an external objective world, there must be some fundamental relation between the two. What that relation is, it is the object of metaphysics and philosophy to discover. The only certain definition of matter in relation to consciousness, therefore, which we can give at the present time is, that it is *objective* thereto. So long as there is an objective world external to consciousness, that world must be in some sense material; and however far back we may carry our analysis of matter, it must always have this characteristic of objectivity. If we think of consciousness as functioning on other planes which are not material in our present physical apprehension of the term, if, for instance, we think of the possibility of entering 'another world' after death, it is evident that in so far as that world is objective to our then state of consciousness, it must be *material* in some sense of the term; for if in

that world there are objects or bodies, they must be formed of some kind of *substance*, which will differentiate them from consciousness, and will give us the impression of subject and object, of a self and a not-self, just as we have now on the physical plane. Even a 'spiritual body,' *quâ* body, must be material in so far as it is the *object* of consciousness, and, as such, is a not-self.

But these metaphysical considerations are not the province of science, in the modern acceptation of the term. Science commences with the empirical fact of an external objective world, and deals with that world as an independent reality. The tendency of science is to make matter, or substance, the permanent reality of the universe, rather than consciousness. Nevertheless there is a higher science, a science of the *Self*, as well as a science of the not-self. To reach the highest truth we must have a knowledge of both.

Let us now endeavour, in the first instance, to ascertain how far our modern science can take us in its analysis of matter and force.

Matter presents itself to our senses in three states, the solid, the liquid, and the gaseous. Furthermore, we see that there are a great many different substances which possess very different qualities; that some of these can exist in all three states, some in two, and some only in one. Water is the most common instance of a substance existing readily in all three states. The metals, such as iron, gold, lead, etc., which commonly exist in a solid state, can be liquefied by heat; liquids may be either solidified or rendered gaseous by appropriate means; while substances which usually exist as a gas, such as oxygen, hydrogen, carbonic acid, etc., can be liquefied, and even solidified, by extreme cold and pressure.

It is fairly obvious to our unaided senses that most of the substances with which we deal in everyday life are not simple substances, but are compounds of others. But if we wish to discover the exact nature of these compounds, to discover what are the simpler elements into which they may be resolved, we must have recourse to the science of chemistry.

Here we take one step further than we can go by means of our unaided senses; we take the first step into the arcane, into that region which is hidden from the senses, but which is discernible by the mind and reason. We also take a first step from the common *appearance* of things towards a

better understanding of their inner nature, towards a definite answer to the question, what is matter in its ultimate nature ?

The first and most obvious business of chemistry in this respect is to resolve all known substances into their simplest elements—to try and discover what are the most primitive forms of matter. We find by analysis, for example, that such a common thing as water is not a simple substance, but can be resolved into two elements, namely, oxygen and hydrogen, each of which exists in a natural state as a gas. We do not find, however, that oxygen and hydrogen can be split up into anything else, and these are therefore classified as *elementary* substances. The same must be said of all the metals ; gold, silver, iron, copper, etc., are all *elementary* substances, incapable of being resolved by any known process into any simpler forms of matter.

The number of simple elementary substances which can now be enumerated is between seventy and eighty, but most of these have been known from the remotest times, and during the last century, so notable for scientific discovery and achievement, only some ten or a dozen new *elements* have been discovered, most of which exist in very small and insignificant quantities. It is worthy of note, however, that the scientific and philosophical importance of these rare elements appears to be almost in inverse ratio to their practical insignificance. The existence of some of them, such as Helium, was predicted before they were discovered, and their actual discovery was a fitting climax to some of the most brilliant and remarkable scientific work.

The latest *element* which has been added to the list, an *element* so rare that its very existence was not even suspected ten years ago, is RADIUM. We print it in capital letters because there is no discovery in the whole range of science, ancient or modern, which can compare in philosophical importance with this latest discovery. It marks an epoch in the history of the world, to which we are perhaps as yet too near to realise the full significance. How and why this is so we shall hope to make clear as we proceed.

Out of the seventy or eighty primary *elements*, with perhaps a few more which have not yet been discovered, the whole of those substances—an almost unlimited number—which we handle and manipulate, which we eat and drink, with which

we clothe ourselves, and of which our physical body is built up, are compounded.

But it must not be supposed that because chemical science during the past century has only been able to add some ten or a dozen to the known number of elementary substances, and has been unable to resolve these primary elements into anything else, that therefore it has added very little to our knowledge of the constitution of matter. Apart altogether from the discovery of Radium, our knowledge of the structure of matter is almost immeasurably greater than it was a hundred years ago, when Dalton first propounded his atomic theory.

Space will not permit of our giving any account of the brilliant achievements of synthetic chemistry, of the building up of extremely complex substances which were previously supposed to belong only to the organic world, to be the exclusive product of the vegetable or animal kingdoms. Alcohol, sugar, indigo, formic acid, a large number of fats, and a host of other substances are now made by purely chemical processes, and have taken the place of the natural products which were previously the sole source of supply.

The discovery of *isomeric* substances is another example of the triumph of chemical analysis and synthesis. Isomeric substances are those which have exactly the same chemical composition, exactly the same constituent elements, combined in exactly the same proportions, but which yet differ so much in their properties and effects, that in the one case they may form a deadly poison, in another case be quite harmless. Butyric acid, which gives the peculiar smell to rancid butter, has the same chemical composition as acetic ether, which has the pleasant odour of apples. Each consists of the same number of atoms of carbon, hydrogen, and oxygen ($C_4H_8O_2$), yet their properties are totally different.

Singularly enough, almost all these achievements are based upon the extraordinary combining properties of one very common element, namely, carbon. There are some 60,000 compounds of carbon which have actually been isolated and studied, and others are known to be possible.

All these brilliant achievements would have been absolutely impossible apart from some definite conception as to the ultimate structure of matter, apart from a mathematical knowledge of atoms and molecules, and it is principally in

this direction, in atomic and molecular physics, that such enormous advances have been made during the past century.

Having discovered that certain substances are *elementary*, that they cannot be resolved by any known process into anything else, the next question which naturally arises is, how much can any given mass of such a substance be subdivided, what is the smallest mass or particle of such a substance, is there such a thing as a smallest possible particle, and if so, what is its nature ?

This question was practically settled, so far as chemical analysis is concerned, rather more than a hundred years ago, when Dalton propounded the atomic theory which has since been associated with his name.

Speculations as to the atomic constitution of matter date back to the remotest times, and are specially associated with the name of Democritus, 470 B.C. But the distinguishing feature of the theory of Dalton was that he assigned to every atom a special *weight*, corresponding to the definite weight with which the various elementary substances were known to combine with each other. Thus, for instance, the smallest quantity of oxygen which will enter in combination with another substance is always sixteen times heavier than the smallest quantity of hydrogen. It does not matter whether we weigh these two substances in pounds, ounces, or grains, the combining proportion will always be 16 to 1. Dalton argued from this that if we could isolate a single atom of oxygen and also a single atom of hydrogen, we should find that the oxygen atom is sixteen times heavier than the hydrogen atom. This theory very quickly became the basis of all chemical operations, and even if there were no such things as atoms in reality, it would still be true as an empirical fact that there is a certain minimum quantity of every elementary substance which can enter into chemical combination, and it is that quantity which is called the *atom*.

But the mind cannot rest there, we must push the inquiry still further back, and ask, what is the nature of the atom itself ? Although Dalton's atomic theory satisfies all the requirements of chemical science—up to a certain point—and is perfectly true within its own limitations, there still remains a theoretical and philosophical difficulty. It arises thus.

If the atom is a perfectly definite mass of matter, and, as such, must occupy a certain amount of space, however minute

that space may be : how is it that it cannot be subdivided ? It is impossible to conceive of anything which has bulk or extension in space, which may not be divided, in imagination at all events ; and if in imagination, why not in actuality ? In other words, what is the nature and structure of the atom itself ?

If the atom cannot be subdivided, but yet has mass and extension in space, are we to conceive of it as a hard, rigid, impenetrable particle, as some phenomena would lead us to conclude, or are we to conceive of it as possessing elasticity, as other phenomena most certainly necessitate ? But if it is elastic it must have parts which can move relatively to each other, it must, in fact, be compressible or distortible, and is thus not the simple indivisible particle which the term atom implies.

But if this be so, and the atom can actually be subdivided, how far may that subdivision be carried, and what is the nature of the various parts of which it may thus be presumably composed ? Are we to conceive that each of these smaller parts is still matter, possessing the same characteristics and properties as the atom itself, or are we to conceive that the atoms are built up of some rarer or more subtle element, which possibly might possess none whatever of the characteristics of physical matter, even as water is so totally different in all its characteristics from the two gases of which it is compounded ?

These and similar questions have occupied the most acute minds in science and philosophy during the past century, and many, various, and mutually contradictory have been the theories which have been put forward to cover the observed phenomena and experimental exigencies of the case. The atom has been attacked experimentally, mathematically, and metaphysically from all sides, and in every conceivable manner, but down to the very close of the century it continued to present in practice a hard and impassable barrier, an apparently impenetrable veil which defied all man's efforts to pierce into the arcane region beyond, and perchance to read there the solution of the riddle of the universe.

At the commencement of this chapter we give a remarkable quotation from one of the works of Sir Isaac Newton, written about the year 1704. This passage presents to us in a clear and concise form the orthodox scientific—and we may also add, the orthodox religious—view of the origin and constitu-

tion of matter which has prevailed from Newton's time—not to go any further back—to our own, and which even yet prevails with those who have failed to grasp the epoch-making discoveries of the past decade, or who are afraid to accept them in their full significance, lest they should be swept from their old moorings, from the solid ground of reality—so-called—into an unknown region where matter becomes a purely metaphysical abstraction. Moreover, the thought of to-day is still dominated to a large extent by the old *creational* idea which so evidently held possession of the mind of Newton. In 1885 we find a well known Professor writing as follows of Sir Wm. Thomson's (afterwards Lord Kelvin) vortex-atom theory of matter: " Its very basis implies the *absolute necessity* of an intervention of Creative Power to form or to destroy one atom even of dead matter." [1]

We are very far from saying that natural laws are not, at their root and source, the expression of a divine formative Principle and Intelligence; but it is difficult to see how the formation of an ' atom ' of matter out of some simpler element involves a special creative act, any more than the formation of a ' molecule ' of some substance—say water—compounded out of these same atoms. Moreover, as we know that the atoms *do* disintegrate in the case of Radium, and probably of all other substances, we must, if we accept the above dictum, postulate the intervention of " Creative Power " in the phenomena of radio-activity. If atoms can and do break up by a natural process, they may be—and by all analogy they are—formed also by a natural process.

But the scientific faith of the nineteenth century has been pinned to the conception of an indestructible atom. Over and over again atoms have been called " the foundation-stones of the universe." If they had been called the foundation-stones of materialism, it would have been somewhat nearer the mark. The following quotation is from the famous " Discourse on Molecules," delivered before the British Association at Bradford in 1873 by Professor Clerk Maxwell:—

" No theory of evolution can be formed to account for the similarity of molecules, for evolution necessarily implies continuous change, and the molecule is incapable of growth or decay, of generation or destruction.

[1] *Recent Advances in Physical Science*, by P. G. Tait (Edinburgh), 3rd ed. p. 24.

"None of the processes of Nature, since the time when Nature began, have produced the slightest difference in the properties of any molecule. We are therefore unable to ascribe either the existence of the molecules or the identity of their properties to any of the causes which we call natural.

"Natural causes, as we know, are at work, which tend to modify, if they do not at length destroy, all the arrangements and dimensions of the earth and the whole solar system. But though in the course of ages catastrophes have occurred and may yet occur in the heavens, though ancient systems may be dissolved and new systems evolved out of their ruins, the molecules out of which these systems are built—the foundation-stones of the material universe—remain unbroken and unworn. They continue this day as they were created—perfect in number and measure and weight."

We may note in this, again, the theological bias creeping in, and giving rise to positive assertions which are not merely unwarranted, but which we now know to be untrue.

We may give here one other extract from a popular scientific work, published in 1899, and supposed to give the latest word of science at that date respecting the nature of matter, to show how the idea that matter is something *sui generis* has held scientific minds even down to the very close of last century. In *Matter, Ether, and Motion*, by Professor A. E. Dolbear, of Tufts College, Mass., U.S.A. (English ed. 1899, p. 23), we read the following :—

"There is nothing to indicate that attrition among atoms or molecules ever removes any of their material. It appears as if one might affirm in the strongest way that the atoms of matter never wear out. . . . So one may be led to the conclusion that whatever else may decay, atoms do not, but remain as types of permanency through all imaginable changes—permanent bodies in form and all physical qualities, and permanent in time, capable apparently of enduring through infinite time. Presenting no evidence of growth or decay, they are in strong contrast with such bodies of visible magnitude as our senses directly perceive. . . . There appears to be nothing stable but atoms."

Such indeed was the *appearance* of things at that time. But in 1898 Radium was discovered; and all such long-cherished ideas, with much else besides, were blown to the winds.

We should remark, however, with regard to dates, that it was not until 1902 or 1903 that the phenomena connected with Radium began to be understood, or their true explanation given. It was not until then that it was definitely proved

that the phenomena were due to the actual breaking-up of the Radium atom.

It must not be supposed that the discovery of Radium was an isolated or fortuitous scientific achievement, or that the revolution which it has now effected in our scientific knowledge of the nature and constitution of matter was wholly unforeseen. Such is never the case with any great scientific discovery. The way is always paved by other discoveries and experiments, and the coming event casts its shadow beforehand. The discovery of Radium was a fitting climax to a number of brilliant investigations and discoveries which have never been equalled in the history of science, and which will assuredly mark out the past decade, even in the light of more brilliant achievements yet to come, as the definite triumph of mind over matter, as the commencement of a new era in science and philosophy.

For the great fact which is represented by the work of that decade is this—*that we have got behind the atom of matter.*

We must go back much more than a decade for the actual experimental foreshadowing of this momentous achievement. We must go back some 30 years, to the discovery by Sir Wm. Crookes of what are known as the *cathode rays*. It had long been known that when an electric discharge was made to pass through a tube from which the air was exhausted—commonly called a Geissler tube—certain remarkable luminous effects could be observed, but their significance was not understood. These effects were exhaustively studied by Sir Wm. Crookes, who was also able, by obtaining a very high vacuum in his tubes, to observe certain effects which had not hitherto been recorded. These effects were found to be due to a peculiar form of radiation which emanated from the cathode electric pole within the tube. When these *rays* impinged upon any substance, upon the opposite pole or anode, or upon the walls of the tube, they produced certain heating and luminous effects, notably those of phosphorescence and fluorescence. They were found to travel in straight lines; to cast a shadow of any object placed in their path; to be capable of deflection by means of a magnet; and, perhaps more extraordinary still, they could produce mechanical effects, such as driving a small windmill. All these phenomena were very difficult to explain on the supposition that the cathode rays were similar in nature to other known forms of

radiant energy, such as light or heat; and the theory which Sir Wm. Crookes himself put forward was, that the rays consisted of actual particles of matter repelled from the cathode with very great velocity under the influence of the electric current. But this matter he supposed to be in a different state from that with which we are commonly familiar; and he named it ultra-gaseous, or *radiant matter*. This explanation is now known to be substantially correct, but it was not accepted at the time.

For twenty years or more Crookes' tubes were in general use for demonstration and experimental purposes, without anything very remarkable being further discovered. But in 1895 Professor Röntgen observed, quite by accident, that there was a new and extraordinary kind of radiation emitted by these tubes, and that these *rays* were active *outside of the tube*. The presence of these *rays* is manifested by their ability to produce powerful fluorescence in certain substances, such as the platino-cyanide of barium. But their most striking and remarkable property is that of acting upon a photographic plate, and of penetrating ordinary matter to a certain degree depending upon the density of the matter. This characteristic of the rays was utilised, as is now so well known, to obtain photographs of the bones of the body. Owing to the difficulty of accounting for these remarkable rays they were named "X rays." This discovery was one more step in the notable series which culminated in the discovery of Radium.

The next step was the discovery by Professor Henri Becquerel in 1896 of the peculiar properties of Uranium. He found by a series of experiments on the fluorescent properties of this substance, to which he was led by the discoveries of Crookes, Röntgen, and others, that Uranium, like the Crookes' tube, possessed the peculiar property which is now known under the general term of *radio-activity*. It was found to emit a peculiar kind of radiation which was capable of penetrating matter, and of producing effects on a photographic plate. Compared with the X rays, this property was very feebly manifested in the case of Uranium, but still it was there, and had to be accounted for.

In the meantime other investigators were at work in other departments of chemistry, physics, and mathematics, all endeavouring to undermine the stability of the hitherto

indestructible atom, but the significance of their work was only understood by a very few.

The next date takes us to 1898, when Madame Curie published the results of an exhaustive examination of all the known elements for any trace of radio-activity. Only one, namely, Thorium, was found to possess that property, and a new one—Polonium—was discovered. But her investigations led Madame Curie to surmise the existence in compounds of Uranium of a new and hitherto unsuspected element, possessing immensely greater radio-activity than either Uranium or Thorium. She immediately set to work to discover this element, and the result was—Radium.

Such, very briefly, is the history of the remarkable discoveries which have revolutionised the orthodox scientific conceptions of matter, and of much else besides.

The significance of Radium lies in the fact that here we have an element which is actually *disintegrating itself*; that the atom of Radium—or at all events some of the atoms, a definite proportion of a given mass—are *breaking up of their own accord*, and actually converting themselves into another element—Helium—while some of the contents of the atom fly off into space with enormous velocity, and in doing so give rise to the now well-known phenomena of radio-activity. Some of these emitted particles or corpuscles—those known as the β rays—have been identified with the Cathode rays of the Crookes' tube, and they are found to possess a *mass* which is about one-thousandth that of the lightest atom known, namely, Hydrogen.

The study of the phenomena of radio-activity has led to a very definite knowledge of these extremely minute corpuscles, and the evidence is now irresistible that they constitute a sub-atomic form of matter; that all matter, all the atoms in fact, are built up of these *corpuscles*, or *electrons* as they have been called, and that the atomic weight of the various elements is largely if not entirely due to the varying number of *electrons* which go to make up the atom of any particular substance.

But this is by no means the whole of this remarkable chapter of discovery. The obvious question arises, what is the nature of the *electron* itself? Is it still matter, is it only a still smaller subdivision of the atom, of that which with we are already familiar as a *material* substance; or is it something wholly different?

The answer to this question is, that the *electron* is something quite different from what we have been accustomed to think of as *matter*. It may be, and indeed by some scientists is considered certainly to be—electricity. Each *electron* exhibits all the characteristics of a definite quantity of electricity; it is a unit charge, an atom of electricity, as definite and apparently as indivisible in its turn as was the atom of matter which it has supplanted as the smallest known thing. It possesses *inertia*, the most characteristic property of matter, but that inertia *may be* wholly electrical, or electromagnetic in its nature, and not due to what we have been accustomed to think of as the *mass* of the substance. Thus all matter *may be* an electrical phenomenon, and the apparent inertia of matter in bulk only a masked effect of what would be better described as energy rather than matter. For, as we shall see presently, the apparent inertness of matter is altogether illusory. All matter is in reality extremely active.

But when we have said that the *electron* is electricity, and presuming that the existence and properties of the *electron* will account for all the phenomena of electricity as well as of matter—which is by no means certain—we have only changed our name for the thing. What we require to know is, what is the *substance* of the *electron*? There appears to be no doubt whatever in this respect. The *electron* is some form or modification of the *Ether*; it is a manifestation of etheric activity.

Now the Ether is an invisible, impalpable, intangible something, of which we have no direct evidence whatever through the medium of our senses, but whose existence it is necessary to infer from the phenomena of light, heat, electricity, and magnetism. All these were formerly classed as forces, but more recently as modes of energy, or modes of motion. A force may be defined as that which acts in, upon, or through matter to produce motion. Matter cannot move itself. Its fundamental characteristic—in bulk—is *inertia*; it requires force to move it, and force to stop it when it has been set in motion. The amount or measure of this force is the measure of the *mass* of matter involved.

What then is the position which now obtains? Matter has resolved itself into electrons, and electrons are—what? centres of force in the Ether, etheric ghosts, verily as immaterial as the reflection of ourselves which we see in the

looking-glass. For the Ether is absolutely impalpable and intangible. It is so subtle that it interpenetrates the densest substances, and offers not the slightest resistance to their motions, although it apparently fills all space. It is not subject to any of our familiar laws of dynamics, though it is undoubtedly the immediate cause of them all. It belongs to another *Plane* of substance, intimately related to our physical Plane, yet so far as our direct consciousness of it is concerned—non-existent.

Can we pursue these ghosts any further? Must science now own itself baffled and defeated, own that the riddle is more insoluble than ever? By no means. It has long been foreseen by a few that the present position would obtain, and that we should have to fall back upon a knowledge of the Ether for the solution of every problem in physics and dynamics.

As far back as 1867 Lord Kelvin propounded what is known as the vortex-ring theory of matter, in which he surmised that matter might consist of a number of vortex-rings of varying size and complexity, formed in the substance of the Ether. This theory was capable of explaining some, but not all of the properties and phenomena of matter. Other investigators have long been dealing with the problem of the Ether, both experimentally and mathematically, but no general consensus of opinion as to its nature and properties has yet been arrived at.

The *electrons* are certainly some form or mode of Ether, precisely what that mode is, or what the Ether itself is, is the next step in the solution of the great problem.

If, then, we have only pushed the question back one step, to an impalpable and unsubstantial region where it is apparently much more difficult to follow it: what have we gained?

We have gained very much indeed—philosophically. In the first place we have no longer two unknown factors—matter and Ether—to deal with, but only one—Ether. So long as matter was irresolvable into anything else, it was also an irresolvable factor in the equation of the universe; it might be considered as a primal or primordial entity, whose existence it was necessary to account for *sui generis*; and indeed, as we have already seen, it was so accounted, almost without exception, by 'natural philosophy,' not to mention authoritative religion.

But the whole of philosophy is necessarily directed towards a unification of all phenomena, towards some conception of the Universe as a Unity, in which there are not several Ultimate Principles, or Fundamental Realities, but only ONE.

And if matter has now been definitely traced back to some more primal factor, to something which is more nearly akin to what has hitherto been classed as *force* or *energy*, to something which takes us altogether out of the materialism of matter: it is one step, and that a very large one, towards such a conception of a primal basic fundamental Reality, of a unifying Principle which is certainly not matter, and which did not 'create' matter as a special act—out of nothing—but of which matter, in common with every other phenomena in the external objective world, is a mode and a manifestation.

In its higher aspects that fundamental unifying Principle, or Noumenon, may be Mind, Spirit, Consciousness, Life, or Pure Being, whatever any of these terms may hereafter come to signify. Having gained the first step, having definitely got behind matter, and resolved it back to another Plane, the further steps become, by principles of correspondence and analogy, and the general uniformity of nature, almost certainly assured.

Thus physical matter, *quâ* matter, must cease to be regarded as a 'created' thing. It takes its appropriate place as an evolved product, it falls into line with that universal principle which operates in all phenomena, and is the basis of all real philosophy, both ancient and modern—the principle of evolution.

Herbert Spencer, to whom we owe the modern development of this great principle, deals very exhaustively in his *First Principles* with the question of the divisibility of matter, and comes to the natural metaphysical conclusion that matter, so long as it has extension in space, must be infinitely divisible. But he assumes that matter as such is indestructible, and that evolution is merely the result of redistributions of matter and force. On the other hand, many physicists, materialists, and upholders of the atomo-mechanical theory, will have nothing to do with such infinite divisibility. Thus we find Büchner, in his *Force and Matter*, saying: "To accept infinite divisibility is absurd, and amounts to doubting the very existence of matter."

In 1887 Sir Wm. Crookes published a paper on "The

Genesis of the Elements," in which he outlined an evolutionary process for the chemical elements from some *Primordial Substance*, which he termed *Protyle*, in accordance with what is known in chemistry as the periodic law. This was perhaps the first definite attempt to deal with matter itself from an evolutionary point of view, and, like much in the work of this scientist, was suggestive of very much else which was not acceptable at the time, but which afterwards became clearly recognised.

But if we go back in philosophy to still earlier times, to Medieval Alchemy, for example, we find there very definite statements as to the possibility of transmuting one element into another; in other words, the Alchemists either knew, or surmised, that the atom of matter was not indestructible and immutable. There is no positive and conclusive evidence that the transmutation of one metal into another was ever practically accomplished, though many students of alchemical lore believe that such was the case; but it is at least remarkable that the Alchemists should have taught the possibility of such a process, which we now know to be theoretically correct, and, in the case of Radium, is actually being accomplished by a natural process. We must remember also that in those times Philosophers had to be very careful of their skins, for the infallible Church, which tortured Galileo and sent Bruno to the stake, had a great deal to say in the matter. Moreover, it is very unlikely that any one who really did possess this knowledge would make it common property. The absence of any definite evidence that the process was actually accomplished is therefore hardly to be wondered at, and must not be taken as conclusive.

We may also go back to the old Greek Philosophers for many conceptions both of matter, of the Æther, and of evolution, which find a singular confirmation in our most recent discoveries.

Further back than that again, we may go to the old Vedânta Philosophy of the ancient Aryans, and find therein a statement of the principles of cosmic evolution which is immensely wider in its scope than any of the accepted doctrines of the present day, and which definitely asserts the evolution and involution of the whole of the Cosmos from one Primal Source, in accordance with a periodic law.

We may, therefore, now ask: if physical matter is derived

or evolved from the Ether, from what is the Ether itself derived? Is it a primitive and indestructible substance, is it the *Urstoff* of the universe, or is it in turn derived from something still further removed from the Plane of physical matter? Is there some form of substance which approaches still nearer to that eternal and fundamental Reality which the mind must of necessity postulate as the basis of all phenomena, and which, approaching nearer and nearer to that Reality, must take on more and more the characteristics of free, unconditioned, unbounded and infinite Life and Consciousness, departing more and more from the opposite pole which is to us physical matter?

Physical science can give no answer to this question; it has enough to do for the present without pushing the inquiry any further back than the Ether; and indeed it is an immense step to have got back so definitely, by purely inductive and experimental methods, to the Ether itself.

But the question in its final form is not a physical one at all, it must necessarily be a metaphysical and philosophical one, for it must include the factor of consciousness, and the relation of subject and object. Orthodox science, however, abhors metaphysics, its conceptions of the universe are nothing if not dynamical; and who ever heard of the kinetic energy of consciousness, or applied to it the methods of the calculus?

The most that science can postulate in this connection is the necessity for the existence of some ultimate substantial basis, something which we may term *Substance* even if we cannot term it *matter*, at the root of all the phenomena of matter and energy; the existence of some form of *Primordial Substance*, eternal, indestructible, immutable in the sum total of its attributes or qualities, which at present are represented in the scientific consciousness as Matter, Ether, and Motion.

Although, therefore, as we have now seen, it is necessary that we should rid ourselves of the idea that physical matter is a 'created' product, or that it stands in any sense by itself as a special or primary factor in the constitution of the Universe considered as a Whole; and although we must abandon the favourite scientific dogma of the nineteenth century that (physical) matter is indestructible: we find that it is still necessary to fall back upon some idea of *Substance*, such as the Ether, from which matter is derived, or crystallised out,

as it were; and if the Ether in its turn—as indeed is very likely—proves to be atomic in its structure, or at least has some characteristic which is equivalent to atomicity, namely, that it is not continuous in its structure as it has hitherto been considered to be, that it is not homogeneous, and does not completely fill space: then we should have to fall back upon some further form of Substance, interpenetrating the Ether, as the Ether does physical matter, and from which the Ether itself might also be derived or differentiated out.

It should be noted here that this is quite a different idea from that of the infinite divisibility of matter in the old sense, such as Herbert Spencer deals with in his *First Principles*. That idea is based upon the supposed indestructibility of matter *quâ* matter, a thing which we now know to be false. The idea which must replace it is that of matter as the resultant, the end term, as it were, of a series of differentiations from some Primordial Substance, which may be very many removes away back from physical matter as we know it; and which, even in its next remove, is something so totally different from matter, that any conceptions we can form of it based upon our common experience of the material world on this Plane of consciousness, only result in the most absurd contradictions.

Whatever, therefore, may be the nature of that Ultimate Reality which is the Universe, we must note here that in so far as all phenomena imply a duality of subject and object, in so far as there exists in consciousness an objective world, it would appear to be necessary that we should demand as the basis of that objective world some form of *Substance*, which *quâ* Substance must always appear to be an independent reality outside of consciousness; to be, in fact, the not-self.

We shall revert to this later on, but it is necessary here, and from the purely scientific point of view, that we should clearly grasp the principle that the whole phenomenal universe must have emanated from, and may be resolved back into, one Primordial Root Substance, and that the various differentiations of this Primordial Substance constitute a descending series of Planes, of which the Etheric and the Physical appear to us to be the two lowest terms, the furthest removed from the Primal Noumenon.

The concepts of modern science respecting this Primal

Noumenon or Primordial Substance, are at present almost entirely dominated by the physical dynamics and dead-atom mechanical theories which have constituted the orthodoxy of science during the past century.

Whilst the scientific method of slow and cautious advance upon the assured ground of experimental facts is, in a certain limited sense, the real basis of all true knowledge, it has to be accepted with many qualifications and much reserve respecting a large part, indeed the largest part, of human nature and experience, which science cannot touch by its methods. It must be clearly understood that scientific theories and principles, in so far as they are true, are only true within very narrow limits, and the whole history of science is one of constant readjustment of theories to meet the requirements of a more extended knowledge of phenomena.

There is a natural tendency of the mind to explain all new and unfamiliar facts in terms of those concepts which have been found adequate to represent the already known phenomena ; and not merely so, but also to attach to those concepts a false and misleading significance, to forget the infinity of possibilities which lie behind phenomena, and to give to the external world a reality and a finality corresponding to the already formed concepts. An exclusive reliance upon scientific knowledge undoubtedly exaggerates this natural tendency of the mind, as witness the dogmatic pronouncements of many prominent scientists during the latter half of the nineteenth century, some of which make very curious reading at the present time. It also causes many facts in other departments of human experience to be rejected on *a priori* grounds, if those facts appear to be violently in conflict with accepted theories. Witness in this respect the attitude of orthodox science towards psychic phenomena, because, forsooth, psychic phenomena appear to—and undoubtedly do—indicate a higher order in nature than that of the mere mechanics of science.

Now we may explain a derived phenomenon in terms of that from which it is derived, but we cannot reverse this order. We may explain matter in terms of Ether, but we cannot explain Ether in terms of matter. We may possibly ultimately explain both in terms of Consciousness ; but when it is known that Consciousness can act independently of the physical organism, we must definitely abandon the idea of explaining

Consciousness in terms of that which Consciousness itself uses.

Desperate attempts have been made by certain scientists to accomplish this latter feat, to conceive of the ultimate factor of the whole universe as a mere movement of dead atoms. We shall notice one of these attempts somewhat more in detail in a subsequent chapter.

Many attempts have also been made to conceive of the properties of the Ether, to form a mental picture of its nature and constitution on the basis of the familiar principles of mechanics and thermo-dynamics. The mutually destructive theories of the Ether which have resulted therefrom are too numerous to mention. It is of course perfectly legitimate and necessary that a provisional 'working hypothesis' should be formed, and this will naturally be on the basis of what is already known and familiar. But when it is sought to explain the whole Universe from top to bottom in terms of *derived* phenomena, instead of in terms of that from which it is derived, when certain facts even are rejected, as being inconsistent with already formulated articles of faith, whether scientific or otherwise, the only result can be confusion and the darkening of counsel.

So long as we are dependent upon our physical senses and organism for the consciousness of an external Universe, all that we can know of the higher Planes, of the Etheric, the Mental, and the Spiritual, must be disclosed to us—objectively—in or through physical matter, must in fact be *accompanied* by physical phenomena. We have absolutely no knowledge of the Ether apart from its action in or upon physical matter. Yet the Ether is not a phenomenon of matter; quite the contrary, matter is a phenomenon of it. Are we then to say that thought, life, consciousness—being necessarily and inevitably accompanied on this Plane by physical phenomena—are therefore *caused* by physical matter, or even by physical matter *plus* Ether and force? On the contrary, all analogy would teach us that the physical Plane lies furthest from, and not nearest to, the One Eternal Noumenon, the Plane of Reality—if indeed anything can be said to be nearer or further from that Reality, save in our own limited and individual cognition of it.

CHAPTER III

THE GREAT AND THE SMALL

" The world around us opens before our view so magnificent a spectacle of order, variety, beauty, and conformity to ends, that whether we pursue our observations into the infinity of space in one direction, or into its illimitable divisions in the other, whether we regard the world in its greatest or least manifestations . . . we find that language in the presence of wonders so inconceivable has lost its force, and number its power to reckon, nay, even thought fails to conceive adequately, and our conception of the whole dissolves into an astonishment without the power of expression—all the more eloquent that it is dumb."—KANT.

CHAPTER III

THE GREAT AND THE SMALL

With a clear understanding that physical matter is not an original or ' created ' article, which must be treated *sui generis*, but a derived or evolved product of something existing on a higher *Plane*, namely, the Etheric : it must cease to be regarded, either in bulk or in its atomic form, as the " foundation-stone of the Universe."

Just as the old geocentric ideas which placed our little speck of a globe in the centre of the Universe, and conceived of the Sun and all the Hosts of Heaven as revolving round it, and as ' created ' for its sole use and glory, had to give place to the larger conceptions founded on a better understanding of the relation and proportions of the heavenly bodies, and to the fact that the Sun is the centre of our own particular System, that our whole System is only an insignificant unit in space, and is itself rushing through space at the rate—astronomers tell us—of 700 millions of miles in a year, and in all probability revolving round some further centre in its enormous depths : so the conception of physical matter as constituting the basis and *reality* of the Universe must now give place to a truer and deeper insight into the nature of that Reality, and the proper relation of ' matter ' to it.

Physical matter not merely does not *constitute* the Universe, but even in its sum total it is an utterly insignificant portion of that *plenum*, that *fulness* which alone can be considered to be *the* Reality, and which—either as Substance or as Being—is neither ' here ' nor ' there,' but everywhere, and to whose eternal nature physical matter may well be related merely as an *accident*, a happening, an unessential, in ' time ' and ' space.'

It is curious to note in this connection that one of the latest of the many serious scientific theories put forward as to the relation between matter and Ether is, that the atom

is not a specialised form, a condensation or aggregation, as it were, of the Etheric Substance, but that it is actually a *void* in the Ether.[1] In other words, matter according to this theory is a minus quantity, it is the *absence* and not the presence of something—which is reversing all our ordinary conceptions of it with a vengeance.

Let us glance for a moment at the distribution of matter in space, in order that we may obtain a juster view than commonly prevails of its proper relations and proportions.

Using our physical eyes we look outwards into space, and see thousands upon thousands of Suns and Worlds in the Star-strewn Heavens. Spectroscopic research shows us that these heavenly bodies are composed of material elements which are mainly similar to those with which we are familiar on our own Earth.

Astronomical observation, and instruments of great delicacy and refinement, have enabled us to calculate within a very small limit of error the distances and sizes of those bodies which constitute our own Solar System. The Sun, which occupies the centre of our System, and round which our Earth revolves once in the course of every year, is 93 millions of miles away from us ; consequently, the vast circle which the Earth must describe in its annual journey is some 578 millions of miles in circumference ; to get round which in the course of 365 days we must rush through space at the rate of 66,000 miles per hour.

Between our Earth and the Sun, revolving in smaller circles, are two other worlds or Planets, Venus and Mercury ; the former 67 millions, and the latter 36 millions of miles from the Sun. But outside of our orbit, revolving in still vaster circles, are five other superior Planets : Mars, Jupiter, Saturn, Uranus, and Neptune. The latter, so far as is known, is the outermost member of our System. Its mean distance from the Sun is 2,792 millions of miles, and it takes more than 164 of our years to accomplish a complete journey in its orbit round the Sun.

Vast as are these distances, however, they are as nothing compared with those which separate our Solar System from the so-called ' fixed stars,' which, however, are not ' fixed ' at all, but are moving through space with enormous velocity ;

[1] Professor Osborne Reynolds, *The Rode Lecture*, on " An Inversion of Ideas as to the Structure of the Universe " (Cambridge Press, 1902).

their distance from us, however, being so great that their movement is not apparent, even over long periods of time. From the records of ancient astronomers, however, it appears that some of the constellations have altered their configuration, whilst modern spectroscopic research furnishes us with a direct method of detecting and measuring some of these movements. In this manner, motions of the so-called ' fixed ' stars have been detected at velocities varying from some 20 to 300 or 400 miles per second.

It is perfectly certain that all matter, whether in its atomic or molecular form, or in its aggregations as Planets, Suns, and Systems, is in perpetual motion, impelled by subtle *forces* which make of the parts, and of the whole, a *Cosmos*, a Unity, a manifestation of immutable law and order.

So far as is at present known, the nearest ' fixed ' star is the one known as α in the constellation of Centaurus ; and its distance is estimated to be 24,750,000,000,000 miles.

In dealing with such an enormous distance as this, however, we need some standard of measurement much larger than that of a mile, and it is usual to estimate these distances in terms of the velocity of light. Light travels at the rate of 185,000 miles per second, or let us say that a ray of light setting out from the Sun would reach our Earth in $8\frac{1}{2}$ minutes, and that it would reach Neptune in rather more than 4 hours. But if it continued its journey out into space, it would take $4\frac{1}{4}$ years to reach α Centauri.

In the depths of space there are stars which are certainly thousands of times this distance, or in other words, light would have to travel from them many thousands of years before it would reach us.

These distances are so vast as to convey little meaning to the mind unless they are reduced to terms of something more familiar. We might, for instance, endeavour to make a model of the Solar System, in which the distances and sizes of the various bodies are represented in their proper relation and proportion on a small scale. Let us see how such a model would work out.

It would be out of the question to include α Centauri in such a model. If we were to represent the whole of the vast circle of the Earth's orbit, 186,000,000 miles in diameter, by a small circle the size of a half-penny, we should have to place α Centauri at more than 133,000 times that distance away,

or approximately 2 miles from our half-penny. If our half-penny represented the size of our Earth, then we should have to place *a* Centauri at a distance of 49,284 miles; and yet —so far as we know—*a* Centauri is the nearest star!

We cannot form any conception of the size of the fixed stars, for they are too far away for the most powerful telescope to make any appreciable difference in their apparent diameter; we can only judge of their probable value in this respect by their comparative brightness. Many of them are doubtless blazing Suns, exceeding our own Sun in size and brilliancy many thousand times. We do know, however, the comparative sizes of the various members of our Solar System. Representing now the diameter of our Earth—7,926 miles—by a half-penny, or the Earth itself by a ball one inch in diameter, the Sun would be represented by a globe rather more than 9 feet in diameter, and this globe would have to be placed at a distance of 326 yards from the little ball representing our Earth.

But the Earth, as we have already seen, is quite near the Sun compared with the planet Neptune, the outermost member of our System. Neptune is rather more than 30 times farther away from the Sun than the Earth, consequently it would have to be placed at a distance of 9,780 yards, or rather more than $5\frac{1}{2}$ miles.

A model of the Solar System on such a scale as that would be somewhat inconvenient, and we must reduce our scale of dimensions still further in order to bring it within reasonable proportions. Instead, therefore, of representing our Earth by a ball one inch in diameter, we may represent the Sun, which has a diameter of 866,200 miles, by such an object; and we can then place our Earth at a distance of 9 feet. Even then, however, Neptune would have to be more than 90 yards away. But the difficulty is that if the Sun were represented by a one-inch ball, the Earth would have to be something less than one-hundredth of an inch in diameter, or let us say somewhere about the size of a full stop on this page. Venus would be about the same size, and Mercury less than half.

It is evident from these considerations that the distances are so great compared with the sizes, that we cannot construct any model, nor draw any diagram, which shall represent both distances and sizes in their proper proportions. However

great in fact we may think those Suns and Worlds which go to make up what we commonly call the Universe, they are but insignificant specks in the vast and illimitable expanse of Space.

What else, then, does Space contain? What is it which *fills* Space, which perchance *is* Space? Nothing which is visible or palpable to our physical senses; and, therefore, for most people, it is a *void*, it is empty of all Reality. Even for the materialistic scientist, although he knows that it is not void, that at least it contains the Ether, yet it is empty of everything that can be called Reality in any true sense of the term, for it is empty of everything connected with Life and Consciousness.

It is impossible to conceive of space as coming to an end; it is equally impossible to conceive of it as not coming to an end—notwithstanding all the speculations and demonstrations of the transcendental geometricians as to the curved nature of space, and their efforts to prove that parallel lines may meet in infinity, and a straight line, if infinitely prolonged, will return upon itself. But the speculation as to whether the particular material universe of which we are cognisant may not really have a limit, whether in fact it may not have a definite configuration, is a legitimate and natural one. The existence of the Milky Way is supposed to point to such a configuration as approximating to that of a flattened sphere or disc.

Now it is quite possible, and indeed probable, from all that we know of the distributions and groupings of matter, both in the small and in the great, in the microcosm and in the macrocosm, that our particular universe has a definite limit and shape. But even supposing that this could be ascertained beyond any doubt, and that our universe, incalculably vast as it appears to be, has yet its limits—there is still space beyond; and in that space other universes, as vast or vaster than our own; and who shall say how many of such universes? Recent investigations based upon the movements of the so-called *fixed* stars, tend to show that the whole cosmos of stars visible to us may be divided into at least two definite universes; two vast systems, each having its own distinctive motion in space.

We must, in fact, come to the conclusion that the grouping of matter into atoms and molecules, into systems and constellations and universes, is infinite both in time and space;

that by no stretch of the imagination can any *finality* be arrived at in that direction, nor any Reality; for it is all *phenomena*, an endless sequence of *change*, whilst the Reality which we seek is the Eternal Changeless Noumenon, which, though it *causes*, through the unchangeable Power of Its own Nature, all this infinite succession of phenomena in time and space, is Itself in no wise bound or limited thereby, nor under any illusion of birth, or evolution, or death, but knows all this as the infinite pleasure of Its own Infinite Nature and Will.

If science could conduct us out into space to the limits of our own material universe; if it could clearly define and measure those limits; it would still, in fact, only have conducted us to the borderland of Space, it would not even have touched for us the real problem of Space itself, and it would leave us still straining our eyes to catch a glimpse of other universes, and despairing, as well we might, of ever finding in those illimitable depths a solution of the riddle of Life. What, indeed, could we see at the limits of our own universe, save an endless reflection of that which we see here; or how could we find *there*, if we have not found it *here*, that Noumenon which in reality is,

"Closer than breathing, and nearer than hands and feet"?

If, then, we cannot find this in any wise by looking outwards, let us see how far science can aid us in looking inwards, and whether by any analysis of matter and force we can hope to come any nearer to a realisation of the nature of that Reality which we are seeking.

We have already seen that all matter consists of an aggregation of *atoms*, but we have not dealt with the comparative sizes and groupings of those atoms. The existence of solid substances naturally suggests that the atoms, or the molecules into which they combine, are packed so closely together as to be incapable of any motion relatively to each other. But this is only the common appearance of things, which is entirely relative to our own particular physical organism. There is no such thing as a solid substance, in the sense that there are within it no interspaces, and the densest substances allow of many movements of the component atoms and molecules.

In our ordinary conventional habits of thought we are accustomed to regard space as extending *outwards*, and hardly

at all as having any extension *inwards*. When we think inwards, we conventionally think of a diminution, not of an extension. Far from thinking of space as being *infinite* in an inward direction, we think of it as diminishing to—nothing.

But science now discloses an infinitude within, comparable in every respect to the infinitude without. Using our physical eyes, and with the aid of a powerful microscope, we discover a beautiful world of life and form, so minute that we are lost in wonder and admiration of the possibilities of nature in the infinitely small, just as we are in the possibilities of the infinitely great. But what the microscope can reveal of the infinitely small is as nothing to what physical research discloses as to the molecular, atomic, and sub-atomic structure of matter.

It is perhaps only recently, since the discovery of Radium, and the existence of *electrons*, that we have really been able to appreciate and understand the infinite contents of the inner depths of space, the possibilities and potencies which lie in the infinitely small, the endlessness of space in that direction as well as in an outward direction.

Astronomy, by disclosing to us the relative sizes and distances of the celestial bodies, enables us to realise the infinite extent of space in an outward direction. Without the science of astronomy, the star-strewn vault above us would be nothing more than an object of childish wonder, and the stars themselves, for anything we really knew, might be, literally, holes bored in the floor of heaven to let the glory through. Perchance there may be found even yet to be an exceedingly deep truth in that idea ; but then the language in which we thus express it will be poetical and figurative, and not a literal statement of fact.

Yet the old ideas which prevailed before astronomy became a science—or perhaps we should rather say, in those communities in which astronomy was not known as a science —still survive in the conventions of religion. Probably most people who think of Heaven at all, think of it as a *place*, located or related, both in time and space, to the material universe of which they are at present conscious. They think of it as *outside* and *above*, in spite of the express declaration that " the kingdom of Heaven is within you." Prayers are directed upwards and outwards, and the Deity is commonly supposed to be extra-cosmic, outside of things and of ourselves.

Now just as it is impossible to conceive of space as coming to an end anywhere in an outward direction, so also it is impossible to conceive of its ending anywhere in an inward direction. But to *realise* this to any extent, we must have the *contents* of these inner depths of space disclosed to us, at least in some partial manner, and it is precisely this which physical science, by getting behind the hitherto impenetrable atom, is now able to do for us.

Let us suppose for a moment, by way of illustration, that up to a certain time in our history mankind had been unable to see any of the vast systems of worlds which lie beyond the limits of our own Solar System, and had had no means whatever of detecting or even suspecting the presence of those worlds in the depths of space beyond us ; that, in fact, the only objects visible in the vault above were the Sun, the Moon, and the Planets. What in that case would our conceptions of the universe, or of space itself, have been ? Metaphysicians might no doubt have postulated the necessity of an infinite extension of space, and even the existence of worlds therein, but they would probably have been regarded as idle dreamers by the scientists, whilst the theologians who asserted that Heaven lay right there, just beyond our Solar System, would have had it pretty much their own way.

But now let us conceive that scientific discovery had advanced to such a point as to make it absolutely certain that the space beyond our Solar System contained an enormous number of Suns and Worlds comparable with those of our own System. We might easily conceive that the existence of these—though still invisible to the physical eye—might be demonstrated beyond the shadow of a doubt by certain effects, gravitational or otherwise, upon our own System.

To such a point as that, science has now brought us, as regards the contents of the inner extension of space. That which we have been accustomed to think of as the infinitely small, the *atom*, the final indivisible and irreducible minimum of matter itself, the boundary of our universe in an inner direction—is shown to be a whole cosmos of worlds and systems within itself, comparable in this respect, in the relation and proportion of those inner bodies to each other, with those worlds and systems which we see in the outer extension of space.

Science now shows us that a single atom of some so-called

elementary substance, contains thousands of still smaller bodies, revolving in orbits, or vibrating with enormous rapidity; and that between these minute bodies, or sub-atoms, are enormous spaces, comparable, so far as the size of the sub-atoms is concerned, to the immense distances which separate the heavenly bodies.

Even as there are universes in the Macrocosm which lie infinitely beyond the reach of our most powerful telescopes, so there are universes in the Microcosm which our microscopes are utterly inadequate to reveal. But though we cannot see them we know that they are there, and by the aid of the scientific imagination, by mathematical reasoning, and by analogy from the known laws of nature, we may form a mental image of their constitution and activities.

When, therefore, we look at a so-called *solid* object, we may in our imagination magnify it, or a very small portion of it, many millions of times, so that the smallest particles into which it is scientifically divisible may become in our mental picture of an appreciable size. We should then see that not merely are there great interspaces between the various atoms and molecules, but that these are in rapid and ceaseless motion. In liquids the molecules are farther apart than in solids, and consequently have much greater mobility and freedom of action. In gases they are still farther apart, and each molecule indeed has so much individual action that it is perpetually rushing about with extraordinary velocity, and continually jostling and colliding with its neighbours, and bombarding the sides of the vessel in which it is contained.

A *molecule* is always a combination of two or more *atoms*. It may be defined as the smallest quantity of a substance which can exist in a free state. Even simple substances, such as Oxygen and Hydrogen, require to combine into a molecule consisting of two atoms in order to exist in a free state. The molecule of water consists of three atoms, two of Hydrogen and one of Oxygen. Other compound substances may consist of many hundreds of atoms. These are supposed to be held together into one *system* by the mutual attractions of the atoms, but may be separated by appropriate chemical means; and we must picture to ourselves these systems of atoms as being somewhat analogous on a small scale to what our Solar System is on a large scale, where each of the Planets and the central Sun might be taken to represent the different

atoms. We must not, however, picture the molecule as a mere inert mass of still more inert atoms, clinging to each other somehow or anyhow. We have already referred to the fact that the same number of atoms can, in the case of *isomeric* substances, form two totally different molecules, and this fact points to some very definite structure of the molecule, to the fact that it is a *system*, a cosmos, governed by law and order. Moreover, the more we penetrate matter the less *inert* it becomes. It is only matter in bulk which has the appearance of being inert. The molecules of a substance are in constant motion; the motions of the atoms are still more vigorous; and recent discoveries have shown us that the atom itself is a centre or focus of enormous activity. In fact, the more we penetrate into the inner recesses of matter, the more active it becomes.

Let us now endeavour to form some idea of the magnitudes with which we have to deal in this microcosmic universe.

The smallest object which can be detected by means of the most powerful microscope is such that about one hundred thousand would have to be placed side by side in order to cover the length of one inch. Blood corpuscles are common objects, and they are of such a size that it would require ten thousand of them to make up one inch. But a molecule of water is probably some twenty-five thousand times smaller than a blood corpuscle, that is to say, it would require some 250,000,000 to cover the length of one inch. A cubic centimetre of water is estimated to contain a number of molecules which would be represented by the figure 3 followed by twenty-two ciphers.

These figures, by reason of their very magnitude, dwarf our imagination, and convey as little real meaning to the ordinary mind as those at the other end of the scale with which we have to deal in astronomical distances; and just as in the latter case we had to reduce them to terms of something more familiar in order to grasp somewhat of their relation and proportion, so in this case we must magnify our molecules and atoms in order to obtain a better idea and a clearer mental picture. It has been estimated by Lord Kelvin, that if we take a drop of water and magnify it up to the size of our Earth, we should then find that the magnified structure was somewhat more coarse-grained than a heap of small shot, but probably less coarse-grained than a heap

of cricket balls. Each of these molecules is made up of three atoms, two of hydrogen, and one of oxygen. We do not know what the size of these may be, or what is their relation to each other within the molecule, but it is doubtless one of intense but orderly activity.

But the atom itself, as we now know from the phenomena of Radium and radio-activity, is divisible into still smaller parts, into what are known as *corpuscles*, or *electrons*. What then can be the size of these corpuscles if some thousands of them are required to make up a single atom of matter? This is a very difficult question to answer, and the experimental evidence upon which the calculations must be made is by no means complete or conclusive. Nevertheless, one thing appears to be quite clear, that the corpuscles themselves are so exceedingly minute compared with the size of the atom, that even the marvel of the latter sinks into insignificance.

The corpuscles can go right through a considerable thickness of solid metal. That simply means that in a sheet of metal, such as iron or lead, the interspaces are so great compared with the size of the corpuscles, that the latter have a free passage right through, just as a body the size of our Earth, moving at an enormous velocity in a straight line, might go right through our Solar System without colliding with any of the members of that System, and might conceivably go through a great number of such Systems without any collisions.

Consider what this means in the case of the corpuscles. The β rays of Radium, which are shot out in straight lines at an enormous velocity, will pass in considerable numbers through a sheet of copper or other metal about the thickness of a visiting card. We might calculate from the figures already given how many molecules a corpuscle would have to avoid in order to accomplish this. We might take the thickness of our metal plate at, say, the one-hundredth of an inch, and in that case, since it requires about 250 millions of molecules to extend one inch, it will require 2,500,000 to extend one-hundredth of an inch, that is, supposing that the molecules are packed close together. How close or how far apart they may be in a solid substance we do not know, but it is quite evident that in order to get through even one-hundredth of an inch, each corpuscle must pass an enormous number of molecules, and a still greater number of atoms, without being materially impeded in its flight. It must, in fact, either go

through the spaces which separate the molecules—though these are probably comparatively small—or those which separate the atoms within the molecule itself, or else through the inter-atomic spaces, or perhaps through all three. This proves to us two things: firstly, the comparatively open nature of the densest solids; and, secondly, the exceedingly minute size of the corpuscles which compose the atom itself.

Calculations as to the actual size of the corpuscles or electrons are at present based entirely upon the supposition that they are wholly electrical in their nature, and upon that supposition it is found that their size is only one hundred-thousandth that of the atom itself. The atom of the lightest substance we know, namely, hydrogen, has a mass which is some eight hundred to one thousand times greater than that of the corpuscle, that is to say, there might be 800 or 1,000 corpuscles in a single atom of hydrogen.

But these 1,000 corpuscles will only occupy a very small portion of the apparent size of the atom. If we were to magnify an atom until it was the size of a very large room, and magnify the corpuscles in the same proportion, each corpuscle would still be no larger than a printer's full stop on this page, and a few thousand of them—the total contents of the atom—would only be comparable to a few specks of dust flying about in the room.

But the motions of the corpuscles are by no means haphazard. They move with enormous velocity *within the limits of the atom.* It is only in the case of such rare radio-active substances as Uranium, Thorium, Radium, Polonium, and Actinium that we have been able to detect any break-up of the atom, such as would be implied if any of the corpuscles escaped from that influence—whatever it may be—which holds the atom together, and flew off into space.

The motions of the corpuscles within the limits of the atom may be compared to the motions of the Planets within the limits of the Solar System. Just as the Sun by its attractive power holds together the various members of that System, so there is some co-ordinating power which holds together all the thousands of corpuscles which compose a single atom, and causes their motions to be regular and ordered within certain limits which we know as the size of the atom, but which would be perhaps better defined as its sphere of influence, or boundary of influence. We shall deal

with this somewhat more fully in our next chapter on *Force.*

The size of the Solar System, or its sphere or boundary of influence, might thus be taken, for the sake of comparison, as that of its outermost planet Neptune; that is to say, 5,584 millions of miles in diameter. If now we let this represent the size of a single atom, then a single one of its component corpuscles might be considerably larger than our Earth, but less than either Jupiter or Saturn.

But though science carries us thus far into the region of the infinitely small, into the depths of the inner extension of space, we cannot stop there in thought any more than we can stop at the confines of our vast universe of Suns and Worlds. Infinitely small as are the corpuscles, they still have *extension in space*; and whatever has extension in space can still be subdivided—to infinity.

In an ancient Sanscrit book it is written: "There are vast universes hidden away in the recesses of every atom."

If we turn our attention to the great and the small in *time*, we find the same characteristics. Many and curious have been the theories, both scientific and otherwise, which have been put forward as to the age of our World, and as to the period during which the Sun and the whole Solar System has already existed, or can continue to exist. Some very authoritative and dogmatic scientific statements have been made, based upon the principles of mechanics and thermo-dynamics. We may quote the following from *Lectures on Recent Advances in Physical Science*, by the late Professor Tait, as an illustration of some of these weighty scientific utterances:—

"I dare say many of you are acquainted with the speculations of Lyell and others, especially Darwin, who tell us that for even a comparatively brief portion of recent geological history three hundred millions of years will not suffice! We say—so much the worse for geology as at present understood by its chief authorities, for, as you will presently see, physical considerations from various independent points of view render it utterly impossible that more than ten or fifteen million years can be granted."

But since the discovery of Radium all such dogmatic assertions have looked very small indeed, for in truth they were all based upon the assumption that the atom was an indestructible material body, and moreover that it was *inert*,

the only energy which it possessed being the kinetic energy of its motion as a whole, which energy it was constantly losing in the form of radiant heat, and which could only be renewed by the application of heat or motion from some *external* source. The atom was not credited with any *internal* energy.

But since it has been discovered that the atom itself is a vast storehouse of energy, all these thermo-dynamical calculations and theories as to the age of the World, and the time which the Sun will take to become a cold body, have been scattered to the winds, and the physicists are now willing to grant to the geologists as many thousands of millions of years as they may require—and perhaps a good many more in addition.

The Solar System, as a System, no doubt had a definite commencement in time, and there will no doubt be a time when it will utterly cease to be, for such is the course of all phenomena which appear on the screen of space and time; all must follow the cyclic law of birth, evolution, devolution, and death, whether the period of their phenomenal existence be reckoned by us in seconds or in years, in centuries or in untold millions. In time as in space, "there is no great and no small, to the Soul that maketh all."

The Solar System, as a System, may well have lasted millions of millions of years. In our estimate we have now to reckon not merely the time which the Earth—not to speak of the other Planets—would take to cool down to a habitable state, but we have also to reckon with the time which atomic matter itself may have taken to evolve. For atomic matter as we have it at present is an *evolved* product. Matter itself is subject to the cyclic laws of change. As it has evolved, so also it will involve, devolve, or disintegrate. Radium and other radio-active elements we now know definitely to be doing this, and the probability is that all matter is doing it, but at such an exceedingly slow rate that we are unable to detect it. One thing is certain, that every addition to our positive knowledge of the processes of nature which go on around us, increases the duration of those periods of time which we must conceive of as being necessary for these processes. The limitations which are imposed in any one age or community by the limitations of thought, knowledge, or language, constantly give place to ever wider and still wider generalisations. As we can fix no limits to space in

an outward direction, so neither can we fix any limit to time; and when our whole Solar System has run its course, and is no more, there will still be an infinitude of other Worlds and Systems; for any one of these is but a drop in the mighty Ocean of Infinite Being.

Like space in an inward direction, time is also infinitely divisible. One second of time is not a long period to our ordinary states of consciousness—though a whole lifetime may be dreamt in that brief moment—yet we have to divide one second by hundreds, thousands, and millions of millions, in some of the operations of natural law of which we are cognisant.

The vibrations which give us the sense of musical sound, vary from about 30 per second in the lowest bass, to more than 4,000 per second in the highest treble. But such a rate of vibration is nothing compared with those etheric undulations which give us the sense of light and colour. These vibrations vary from 395 million million per second at the red end of the colour spectrum, to 763 million million per second at the violet end.

In order to appreciate better what this means we may put the matter into this form. The number of vibrations of the string which gives out the sound of the middle C of the pianoforte is 270 per second. The number of vibrations of the middle or F line of the light scale is 618,000,000,000,000 per second. A little arithmetical calculation shows us that our pianoforte string would have to go on vibrating for 72,530 years in order to complete the number of vibrations which are accomplished by a single atom or corpuscle of glowing Hydrogen in one second of time.

What then shall we say of these magnitudes, of the infinitely great and the infinitely small? Are they realities, or only appearances? Is there no Consciousness to transcend them, no Life untouched by their limitations. In Eternity the longest time is even as the shortest; in Infinity the whole Universe is no larger than the atom. The great and the small are equally limitations, because they only display and express a relativity, not a finality or an absoluteness. No amount of multiplication or division can bring us to either of these, nor yet to any Unity.

Does not the very infinity of time and space show us that the Truth we seek lies not in that direction at all; that it can never be reached by any mere *extension*, that it can

never be found in mere external phenomena. Is it not clearly seen indeed that these *quantitative* expressions can never give us the *qualitative* knowledge which alone can satisfy our inmost nature, our heart's desire? The Truth which we seek is the absolute Truth of our own nature and being; we can never be satisfied with any mere relativity, however large that may grow. The true Infinite is in no wise conditioned by time or space; it lies neither within nor without these; it is wholly untouched by them. It lies—within Thyself.

Were it not best, then, that we should, once and for all, frankly abandon in our habits of thought all conceptions whatsoever of the nature of the Universe, and of our individual relation thereto, of the relation of the Self to the Not-Self, which are based upon our conventional standards and ideas of time and space, and turn from the vain quest for Reality in external phenomena to a truer understanding of the subjective nature of that Reality which is, yet is not, phenomena; which is, yet is not, the universe as we know it; and which, being the universe, is also ourselves; and which, not being the universe (as we know it), is not ourselves—as we commonly reckon ourselves—but infinitely more, even as we ourselves in our inmost nature are infinitely more than we commonly reckon ourselves, even to a *oneness* with that Divine Life which IS the Universe.

For nothing can be more certain than that the Noumenon of All, the true Infinite Reality, expresses Itself in our own life and consciousness just as surely as it does in all external phenomena. Just as certainly as that Infinite Reality is the Power which sustains the atoms, as well as that which holds the mighty Suns in their courses; just as surely as It expresses Itself in the infinitely small as well as in the infinitely great: so surely is it the Power which holds together and acts within this body of ours—this body which is itself a vast cosmos of worlds and systems, instinct with myriads of lesser lives and activities.

Nothing can be more certain than that we participate in the nature of that Power which IS the Universe. All questions as to what that Power is, *other than ourselves*, are secondary questions; questions of relativity and proportion; questions of time, and place, and language; of history and of evolution.

As we conventionally know ourselves, we are part of the

pseudo-reality of time and space phenomena ; and it is only as we free ourselves from the limitations of convention, and time and place, as we lose the personal self in the larger LIFE of the Whole, that we can find that real inner Self, which truly is none other than the Infinite and the Eternal Reality.

CHAPTER IV

FORCE, MOTION, ENERGY

"Many contemporary physicists wish to subject Descartes' idea to strict criticism. From the philosophical point of view, they first inquire whether it is really demonstrated that there exists nothing else in the knowable than matter and movement. . . . Nothing proves that those acquisitions, which are the most ancient in historical order, ought, in the development of science, to remain the basis of our knowledge. Nor does any theory prove that our perceptions are an exact indication of reality. Many reasons, on the contrary, might be invoked which tend to compel us to see in nature phenomena which cannot be reduced to movement."—POINCARÉ, *The New Physics.*

CHAPTER IV

FORCE, MOTION, ENERGY

THE mental picture which science enables us to form of the inner nature and constitution of matter is by no means a clear and definite one; and the latest discoveries, as we have already seen, have in no wise served to bring the final solution of the problem any nearer to us. These discoveries have, in fact, utterly dematerialised matter, they have taken us right back to the Etheric Plane, and left us face to face with a deeper problem than ever.

So long as the atoms could be regarded as "the foundation-stones of the universe," we seemed to be on fairly solid ground; and so long as they might be thought of as definite indestructible particles, whose *mass* was unchangeable; so long as these material particles could be regarded as absolutely inert and 'dead,' and as being only acted upon or moved by external forces: it was comparatively easy to construct a mental picture of a solid, a liquid, or a gas, in which these material atoms were simply aggregated in certain ways, and with greater or less density; such a picture being, in fact, only a little exercise of the imagination based upon our common and everyday experience of matter in bulk.

With matter thus defined it was also easy to construct a purely mechanical theory of the universe—leaving out of account the fact of consciousness and a good many other things besides—the two axiomatic requirements of such a theory being those two principles which are reckoned as the 'foundation-stones' of modern science, namely, the indestructibility of matter, and the conservation of energy.

But with the discovery that atomic matter is *not* indestructible, and that it is *not* inert, it is necessary to revise the old conceptions both of matter and of force, or energy.

Let us glance for a moment at the old mechanical conception, in order the better to understand the new position which

now obtains in consequence of the momentous discovery of the vast *internal* energies possessed by the atom itself.

Our common experience of any mass of matter is, that it requires the application of *force* to move it when it is at rest, or to accelerate or retard it when it is already in motion ; and we find in general that the larger the mass, or the heavier it is, the more force is required either to start or to stop it. We cannot throw a 20-lb. shot nearly so far as a cricket ball, and if both were moving with the same velocity we might be able to stop the cricket ball, but hesitate to place ourselves in the way of the shot. This distinctive characteristic of matter is what is commonly known as its inertness or *inertia*. It is stated in Newton's first law of motion as follows : " *Every body continues in its state of rest or of uniform motion in a straight line, except in so far as it may be compelled by impressed forces to change that state.*" Thus matter in bulk appears to be absolutely indifferent to motion ; it cannot originate motion, or move itself, and the *mass* remains the same whether it is at rest or in motion. We commonly speak of it, in fact, as being ' dead,' in contrast with those self-moving organisms which possess the inherent principle of *life*.

But matter in motion possesses *energy*, it is able to do *work*, and a very little consideration shows us that this energy is dependent upon both of the two factors, *mass* and *motion*, or rather upon *mass* and *velocity*. We may stop the 20-lb. shot as easily as a cricket ball, if the velocity of motion of the former is not too great. The shot may be tossed from one man to another, and caught, but if we discharge it from a cannon, any attempt to interfere with it would be somewhat hazardous.

Now we have only to consider the *atom* to be an exceedingly small mass of matter, having as such all the characteristics of matter in bulk with which we are experimentally familiar—*and nothing else*—and our mechanical theory of the universe is fairly complete.

Such a theory, very briefly stated, postulates that all the phenomena of the universe are due simply to the motion of discrete ultimate particles of matter ; that these ultimate particles or atoms are indestructible in time and space ; and that all *energy* is simply the energy of matter in motion, either in its atomic form or in bulk. In short, the mechanical theory is the reduction of all the phenomena of the universe to the two simple terms of matter, or mass, and motion.

We may note here that this theory may either include or exclude the phenomena of life and consciousness. If it includes them, it is materialism pure and simple ; if it excludes them, then it remains to be determined what is their true relation to the phenomenal world of matter, and in what way they enter in and modify, as they undoubtedly do, the distributions of matter and the direction or application of energy. The main point to determine would be as to whether life is a *force*, in the sense that it can originate or *cause* motion of matter ; or whether life is simply a guiding or directing principle, which can affect the distributions of matter and energy without adding to or taking from their sum-total ; which can, in fact, utilise matter and energy without either creating or destroying the same.

Before, however, we can deal with these questions it is necessary that we should clearly understand on what basis the mechanical theory rests, and how far it can take us in its generalisations from particulars to universals.

In the first place, it is of course based upon the empirical facts of our experience of matter and force in the phenomenal world in which we live. We have already seen, in our previous chapter on matter, that up to the close of the last century we had no experimental knowledge of the destructibility of the chemical atom, and that this was very generally regarded as the final and irreducible minimum of mass of matter. The discovery of Radium gave a rude shock not merely to the doctrine of the indestructibility of matter, but also to that of the conservation of energy. It has, in fact, taken us into a region where neither of these doctrines are applicable in their old accepted form ; where, indeed, it might be said that they are not *demonstrably* true ; it has taken us right back to the Etheric Plane as the immediate source of all matter and of all energy, and we have no experimental knowledge whatever of the Ether, except in so far as it acts and reacts upon physical matter.

The minimum of physical matter with which we are now acquainted is not the chemical atom, but the *corpuscle*, or *electron*; and the upholders of the mechanical theory—to whom it is of vital necessity that there should be a minimum irreducible *mass* of matter—are now, therefore, compelled to fall back upon the indestructibility of the corpuscle, until that in its turn shall be proved to be composed of smaller particles,

and so on—*ad infinitum.* This, however, is practically a *reductio ad absurdum.* No amount of subdivision can bring us either to finality or Reality.

For let us clearly understand what is involved or implied in this idea of an ultimate particle. In the first place, it must possess *mass.* Mass is the irreducible minimum of physical qualities. Matter without mass ceases to be matter even in the most remote sense of the term. Now mass, in the ordinary acceptation of the word, is simply any quantity of matter, small or great, and, as such, its primary characteristic is extension in space. But whatever has *size,* however small, may conceivably be subdivided. We may waive this little difficulty, however, as being too metaphysical for serious scientific consideration.

Let us suppose that we have captured our ultimate particle, our irreducible minimum of matter : what will it be like ? Here again we must say—speaking this time in a strictly scientific sense, and from the standpoint of the mechanical theory—that it must have *mass* ; or, as most physicists would probably say, ' mass or inertia.'

Mass and inertia, however, are not, strictly speaking, interchangeable terms, though they have come to be very generally used as such in scientific literature ; inertia having come to signify a sort of *resistance* to motion, an opposing force, which is wholly illegitimate as regards the true sense of the term.

Let us understand in the first place, however, what is meant by the *mass* of a body. Mass is not measured in science by the bulk of a body, but by the *force* which is required to move it. If we find that of two bodies, A and B, A requires twice as much force to move it a given distance in a given time—say one foot in one second—we say that A has twice the *mass* which B has. We have indeed no direct knowledge of mass at all, or rather we have no direct knowledge as to why one body should require twice as much effort to move it as another ; we simply express the empirical fact that this is so by saying that the one has twice the *mass* of the other. Nevertheless, we possess a very convenient way of estimating the *relative* masses of two or more bodies by simply weighing them. The weight of a body, however, is only an expression for the *force* with which gravity acts upon the body ; and since the force of gravity varies at different parts of the earth's surface, the weight of a body is not the same at all places, though the

quantity of matter in the body must necessarily remain constant; and the *mass* also would presumably be found to do so if we had any *absolute* measure of mass.

Now we must understand clearly that *inertia* is not a *quantity* at all—except when the term is used as a synonym for *mass*. It is rather a *quality*—or perhaps not even that, for it is the absence of all qualities. We cannot say that a material particle is more or less dead, because it is—in our common estimation—wholly dead. Neither can we say of a body which is wholly inert, that it is more or less inert, or that it possesses more or less *inertia*. Nevertheless, our common experience of inert matter, that it requires the application of force in order to move it, and that some bodies require more force than others, leads us naturally to associate the idea of inertia with that of the force with which we have to act upon a body in order to move it, and therefore to speak of 'overcoming its inertia,' as if inertia were a sort of resistance which varied with different bodies. What does vary, however, is not the inertia, but the *mass*.

Our ultimate particle of matter then must possess 'mass or inertia'—strictly speaking, mass only—in so far as it must require a definite amount of force to set it in motion when it is at rest—to 'overcome its inertia'—or to modify its motion when it is already moving. But if we ask ourselves *why* such a particle, isolated and at rest in void space, should require a definite amount of force to move it; why, for example, another particle coming into collision with it should not continue to move with a uniform velocity, and carry the other particle with it—there is no answer to be given. The bare empirical fact of which we are cognisant on the Plane of physical matter is: that when motion or energy is imparted from one body to another, *the one body loses what the other gains*.

Our ultimate particle must also be absolutely rigid and inelastic, because elasticity implies a change of figure, and therefore a motion of component parts. But our ultimate particle has no component parts. It must necessarily, by definition, be a simple, homogeneous, hard, impenetrable thing.

All the ultimate particles must be absolutely alike. These ultimate atoms cannot have such inherent differences as we find in the chemical atoms, and there cannot be any mutual action between them other than that which is caused by the impact of one against another. All phenomena, all those

differences or contrasts of one object with another which constitute the very essence of phenomena, are caused, according to the mechanical theory, by differences in the aggregations and motions of these simple ultimate particles, and we must now, therefore, glance for a moment at what is implied in the idea of *motion* in connection with these primitive objects.

We must, of course, pass over the little preliminary difficulty as to how they ever came to have motion at all. Science does not deal with such a question, and indeed *assumes* that it has no real connection with the problem. Nevertheless, the mechanical theory does postulate very definitely that the motion of these ultimate particles is ceaseless and indestructible as *a whole, or in their sum total.* The motion of any one individual particle, or of any aggregation of particles, can be modified, or even arrested altogether, but only by receiving from, or handing over to other particles the exact equivalent of the motion lost or gained.

This is the well known doctrine of the conservation of energy. Energy is simply the power to do work, and although energy or work is measured both by mass and velocity ($\frac{1}{2}mv^2$) it is essentially the handing over of motion—molecular or otherwise—from one body to another. All our experimental science shows us that when energy is transferred from one body to another, when one body gains in motion at the expense of the loss of motion by another body, the sum of the united energies of the two bodies is always the same as it was before the transfer took place ; and if such a transfer takes place among a large number of bodies, the sum-total of all their energies is exactly the same as it was before the transfer. In other words, energy may be transferred indefinitely, but it is never destroyed ; it may appear now in one form, now in another, but in every transformation there is always an exact equivalence in the energy lost by one body, or disappearing in one form, and that gained by another body, or reappearing in another form.

This doctrine is of course the exact analogue of that of the indestructibility of matter, and it largely stands or falls with it.

In order to understand exactly what is implied in this doctrine in its final application to the ultimate particles of matter which the mechanical theory postulates, we must

take a concrete example. When a rifle bullet strikes an iron target, there is a total cessation of the motion of the bullet as a whole (neglecting the rebound), and the motion is not handed on to the target, which remains fixed. What then becomes of it if it is not destroyed? We know that it is mainly converted into a form of motion of the molecules of the bullet and of the target, and reappears as *heat*. The total amount of heat energy thus generated in the bullet and the target as the result of the impact, is the exact equivalent of the energy of the mass of the bullet in motion as a whole immediately before impact.

The conversion of motion or energy in this manner, from external movement of the mass to internal movement of the molecules, is of course wholly dependent upon the mass being constituted of smaller particles which are capable of movement; and we know also that the elasticity of a body is similarly dependent upon its internal structure. When one body rebounds after collision with another on account of its elasticity, as, for instance, in the case of two billiard balls, part of the original motion or energy is accounted for in the rebound, and to that extent, therefore, it is not converted into internal heat energy. If the body were perfectly elastic, it would rebound with exactly the same velocity which it possessed originally, and none of the energy would be converted into heat.

But what would happen if the body were absolutely devoid of parts? We should have to conceive that in that case it would be absolutely rigid and inelastic, and, therefore, it would be incapable of converting any of its mass motion into a motion of constituent parts.

In such a predicament stands the ultimate indivisible particle of the mechanical theorists, and on this basis the fundamental axiom of the conservation of energy or motion falls to the ground, because two such particles, meeting in direct collision with the same velocity, would neutralise each other's motion and energy; and, indeed, every collision whatsoever would mean a destruction of energy to a certain extent. The conservation of energy, in fact, demands of the ultimate particles nothing short of perfect elasticity, whilst on the other hand elasticity implies change of shape, internal structure, or parts, and, therefore, a presumable subdivision.

It rests with the mechanical theorists to show how these mutual contradictions can be reconciled.

Many attempts have been made to get out of these difficulties, but none successfully, and by some the position has been altogether abandoned in favour of what may be called the continuous fluid theory. It is evident that, on the basis of the mechanical theory, there must be—in order that the ultimate atoms should have room to move about—considerable spaces between these atoms; and, there being nothing else in the universe except these atoms, this space would be literally *void*—another serious philosophical difficulty. But it has long been known that space is apparently filled with an exceedingly subtle imponderable substance called the *Ether*, and all the early theories about the nature of this Ether regarded it as absolutely structureless, homogeneous, and continuous: regarded it, in fact, as being of the nature of a perfect, incompressible, frictionless fluid.

Now, if we imagine all space to be filled with this perfect fluid, we may conceive of matter as being of the nature of certain kinds of motion in or of this fluid. This theory is the well-known 'vortex-atom' theory of Lord Kelvin, in which the atom of physical matter is conceived to be of the nature of a vortex-ring formed in and of the Ether of space.

It will be seen that in this theory the ultimate substratum of phenomena is an indestructible *something*—possibly the Ether—which must be classed as *substance* rather than as matter, for it is imponderable, and therefore certainly not matter in the physical sense of the term; but it is open to doubt whether the axiom of the conservation of motion, or energy, could also be retained in this case, unless we postulate an ultimate vortex-ring which is indestructible as such. This is practically the same thing as postulating an ultimate indestructible particle of matter, only that it would have inherent properties—and in particular, elasticity—in virtue of its specific motion, which the ultimate particle has not.

It is impossible to deal here with the extent to which this theory does or does not meet the requirements of experimental science. Now, however, that it is definitely recognised that the *corpuscle* must be some form or mode of Ether or of etheric activity, in fact that all matter as well as all force must be referred back to the Ether: it appears to

offer a better solution of some of the more pressing problems in physics than the old rigid particle theory. But the general tendency at the present time is to regard the Ether as discontinuous, and to abandon the old homogeneous fluid theory; to regard it, in fact, as having some definite kind of structure—atomic or otherwise—of its own; in which case we should have to fall back upon some still rarer medium for the ultimate Primordial Substance, the perfectly undifferentiated, homogeneous World-stuff.

There is one little difficulty in connection with the continuous fluid theory, from a physical point of view. It would seem that motion in such a fluid could not be perceptible motion. Where all space is equally filled with a substance which cannot be aggregated or densified, there does not appear to be room for those phenomenal differences with which we are acquainted, unless we fall back upon some metaphysical idea of pure motion as the basis of all such differences. This may be legitimate when dealing with consciousness, but not when dealing with physics. All physical questions, however, are in their last analysis metaphysical ones. We shall refer to this more fully in Chapter VII.

If we enlarge the scope of the fundamental concepts of science, if we enlarge our definition of *matter* to include some hypothetical *substance* as a substratum of physical matter, and our definition of *energy* to suit the requirements of this hypothetical substance: we shall undoubtedly be on safe ground in asserting that there must be an ultimate and fundamental Reality corresponding to that which we recognise in the phenomenal universe under the forms of matter and force; and, doubtless also, there must be some kind of *equivalence* in every transformation or phenomenal manifestation of this One Reality; whilst its conservation or indestructibility is of course absolutely essential to any conception whatsoever of such a Reality.

We cannot think of motion apart from something which moves; and if we thus enlarge our definition of matter so as to make it inclusive of any ultimate or Primordial Substance which may serve as the basis or substratum of motion, we are doubtless only speaking within the logical necessities of thought when we say that such substance-matter must be indestructible, and that there must be an equivalence in all its transformations. But we are not within either the logical

necessities of thought, or the experimental evidence of science itself, whenwe postulate the *identity* of that ultimate Substance in all, or even in *any*, of its characteristics, attributes, or modes, with that phenomenal *form* of it which we know as physical matter; nor are we justified in saying that the ultimate laws of motion must be *identical* with, or subservient to, those mechanical correlations with which we are familiar in the dynamics of the physical Plane. Thought is undoubtedly motion of some kind; and thought is also dynamic—'kinetic'—according to its own laws, and in its action in or upon the physical organism. But science has not yet touched the dynamics of thought, though it is now dealing very gingerly and tentatively with 'telepathy'—rather because certain facts have become too evident to be explained away, than because these facts are perceived to be a legitimate subject for scientific inquiry. If physical matter may be resolved into Ether, Ether may ultimately be resolved into 'Mind-stuff,' and 'Mind-stuff' into something still further removed from the region of physical dynamics.

Before we proceed to consider the motions of the *corpuscles* or *electrons*, and the part which the Ether now plays in scientific conceptions of the nature of matter and force, we must note that, according to the mechanical theory which now completely dominates scientific terminology and literature, *force* and *energy* are not at all the same thing, though they are often used interchangeably, even by scientific writers.

It was formerly thought that *force* had a substantial existence equally with matter. There were supposed to be a great number of forces, such as heat, light, electricity, magnetism, gravitation, etc., and all these were classed as *imponderables*; they were supposed to be *substantial* but not *material*. But this idea gradually gave place to the mechanical theory, and all these *forces* came to be regarded as "modes of motion," as specific manifestations of *energy*, namely, the motion of *mass*, either atomic or in bulk.

Force may be very simply defined as anything which causes or is capable of causing motion in or of matter. But it is evident that if we accept the mechanical theory, and postulate that matter consists of ultimate particles or atoms whose *mass* is constant and indestructible, and that the sum total of the motions of all the ultimate particles in the universe is a constant quantity, then motion is never *caused*, it always

is, and *force*, considered as something which moves matter, has no real existence. We may use it as a convenient term for anything which appears to be the immediate or proximate cause of motion in some particular body, but it has no real substantial existence.

All so-called *forces*, therefore, according to this view, are at root the energy of motion of the ultimate units of mass, whether those units be called atoms, corpuscles, vortex-rings, or anything else whatsoever which has still to be discovered and named; and the immediate *cause* of motion in any body must be simply *impact* of some other body—motion handed on from one body to another. Thus there are not several kinds of *force*—there is no such thing as force at all; there are not several kinds of *energy*—there is only one kind, the energy of mass movement.

And yet text-books of science tell us that there are two kinds of energy, 'potential' and 'kinetic.' They tell us that when a body has been raised to a height, against the force of gravity, it possesses 'potential' energy in virtue of its position, because a certain amount of energy has been expended upon it in raising it to that position; and it can give back exactly the same amount of energy in some form or another in falling to its original position.

But the fact of the matter is that there is no such thing as 'potential' energy. All energy is necessarily active or 'kinetic,' since motion is ceaseless and cannot be annihilated. It is always active *somewhere*. When we throw a stone into the air its motion gradually ceases, and the stone may finally come to rest, let us say on top of a building. We are told that the reason why the motion of the stone gradually ceases is because it is acted upon by the *force* of gravity, and that this same *force* will cause it to fall again. But we have seen that there is no such thing as a *force*: that this is only a convenient term for the immediate or apparent (or possibly not at all apparent) cause of motion. In this case, science *does not know* what causes the motion of the stone to cease, or what causes it to return to the ground if allowed to fall. There is an unknown something—in the first instance acting as a *resistance* opposing the upward motion of the stone, and in the second instance as a *force* causing it to fall. In each case science calls this unknown factor the force of gravity.

But no explanation of a phenomenon has been given by

merely giving it a name. The explanation which must be given according to the mechanical theory is, that gravity must be some kind of impact of material particles. This is the explanation given by Le Sage, but it does not meet all the requirements of the case, and the hypothetical particles have still to be discovered.

In so far as the stone in its upward flight gradually loses motion, something else must gain it—the motion must be passed on. We know that it is not passed on to the molecules of the stone itself, as in the case of the rifle bullet. The stone is not heated, except in so far as friction with the air is concerned. The stone—*quâ* stone—in its upward flight does not *acquire* any kind of energy; on the contrary, it loses it. There can be very little doubt that it is passed on to the Ether, but how, or in what form, we do not know.

In a mechanical universe such as science postulates, there cannot be such a thing as *resistance* in reality, any more than there can be such a thing as *force*. The one is the term we give to anything which apparently *stops* motion, the other to anything which apparently *causes* it. But we have seen that motion is never really either stopped or caused, it is only handed on from one body to another. A body freely suspended in space—*i.e.*, a frictionless body, such as the ultimate particles must be supposed to be—will instantly respond to the slightest impressed force, whether impact of another particle or otherwise; it offers no *resistance* whatsoever, and it is even doubtful whether such a body could be said to have either mass or inertia. Any real causation or destruction of either matter or motion, any adding to or taking away from the sum-total of the motions of all the ultimate particles in the universe, would be a contravention of the fundamental axiom of science as to the conservation of energy.

Nevertheless, it seems to be difficult for scientific writers to avoid the use of terms which convey—at all events to the lay mind—quite a different impression. We find one eminent scientist, for instance, speaking of "a passive exertion of force without doing work," and of "a force at rest." Also of "a force like that of a groove or slot or channel or 'guide.'"[1] Why not also the force of a dining-table, or an umbrella? The one sustains the weight of our

[1] Sir Oliver Lodge, *Life and Matter*, p. 165.

dishes, which possess 'potential' energy in virtue of their position on the table; the other sustains the bombardment, or 'kinetic' energy, of the rain drops.

We should hardly think, however, that it conduces to clearness of thought to classify grooves, slots, channels, guides, dining-tables, or umbrellas as being in the nature of *forces*.

No doubt also, in a popular sense, we might have "a force at rest." Gunpowder might be said to be a "force at rest"; indeed every material thing not in motion is, in a remote sense, "a force at rest." What we need to realise very clearly is, that a force which is apparently at rest, relatively to some one or more object or objects, may be—and indeed always is—extremely active within certain other limits. If, for example, a heavy fly-wheel be revolving rapidly, it may appear to be motionless, and so far as my body is concerned it is "a force at rest" so long as I do not touch it. But if the fly-wheel should happen to burst, the internal energy of its mass and motion becomes very active in an external direction, and I should probably become very active also in trying to avoid it. So also I may sit on a barrel of gunpowder, so long as no one produces those conditions under which the internal molecular forces of the gunpowder will become active in another direction. These molecular forces are not "passive," they are extremely active within their own particular limits; they only take another *direction* when the gunpowder is exploded.

But what can we make of a "passive exertion of force without doing work"? Any *exertion* of force necessarily implies activity—work done—somewhere, though perhaps not in an outward or visible form in the body with which we are immediately concerned. All so-called force, as we have seen, is *energy*, in one form or another; and all energy is necessarily active, 'kinetic,' somewhere. There can be no such thing as passive resistance in reality—either political or mechanical. The apparent passivity of any resisting body only masks a more subtle kind of activity.

It is necessary, then, that we should clearly understand, in the first place, that a thing is not explained when a name is given to it; and in the second place, that all these scientific terms: matter, force, energy, resistance, inertia, etc., are nothing more than names for the relations and proportions

which exist in phenomena. They are only valid as convenient terms of reference for empirical facts, and if pushed back further than their legitimate *limitations*, are always found to involve a series of contradictions, or unthinkable conditions.

The fact of the matter is that none of these terms are applicable at all to an *infinite* universe. They all express relativity and limitation. Neither the doctrine of the indestructibility of matter nor that of the conservation of energy can be applicable to any Infinity ; for both matter and motion might be destroyed indefinitely, and there would still be an infinite quantity left. The *sum-total* of matter and energy in such a universe cannot be a constant quantity, simply because the Infinite is not a sum-total at all.

Some writers have perceived this very clearly, and attempts have been made to show that the universe is not infinite, but finite, and even to show that space itself is finite, that space is *curved*, and that parallel lines might conceivably meet if prolonged far enough, and a straight line return upon itself. It would take us too far out of our way, however, to discuss that question here.

We must now turn our attention for a moment to the phenomena of radio-activity, and the motion or energy possessed by the corpuscles or electrons of which the chemical atom is built up.

When Radium was first discovered it appeared to afford an absolute contradiction of the two fundamental axioms of science which we have been considering. Radium presents the spectacle of a substance which is continually giving off material or semi-material particles without any apparent diminution in quantity or weight ; and, more startling still, it is continually parting with *energy* in definitely measurable quantities, without any apparent source from which it could obtain that energy. In the words of Professor Boys at the 1903 meeting of the British Association : " This, which can barely be distinguished from the discovery of perpetual motion, which it is an axiom of science to call impossible, has left every chemist and physicist in a state of bewilderment."

Nor was the explanation which was presently given of the phenomenon any more acceptable to many scientific men than that of perpetual motion ; for they had come to regard the chemical atoms almost as a kind of fetish, as the

final and irreducible minimum of matter, and as "the foundation-stones of the universe." The explanation which was offered was, in short, that Radium presented the spectacle of a substance in which the atoms, or a certain number of the atoms in a given quantity, were actually *disintegrating* themselves, and throwing off into space, with enormous energy, part of their constituent elements.

This involved two things which were equally repugnant to the more conservative and materialistic scientific authorities: (*a*) that the chemical atom is not, after all, a stable thing; and (*b*) that the chemical atom is not inert, but contains within itself a vast amount of activity and energy.

If we take a small amount of Radium, and observe its temperature by means of a thermometer, we find that it is several degrees warmer than the surrounding atmosphere, and that *it constantly remains so*. Now heat is energy, and a continuous supply of heat means that we must draw continuously upon some source of energy in order to supply it. Every material object with which we are familiar will always cool down to the temperature of the surrounding atmosphere, after it has been heated, unless we continue to supply it with heat from some other source.

But Radium continues to heat itself, and when this phenomenon was first observed there was apparently no means of discovering from what source it could possibly obtain the vast quantity of energy which it was continually radiating away without any apparent diminution in its activity. It was found that the heat thus developed by a quantity of Radium in one hour was sufficient to raise its own weight of water from freezing-point to boiling-point. It has also been calculated that a quantity of Radium less than could be placed upon one's thumb nail, contains sufficient energy to lift a weight of 500 tons one mile high. The greatest quantity of heat which we can obtain by chemical means is by the combustion of Hydrogen with Oxygen. But the total amount of heat which would be given off spontaneously by a definite weight of Radium would be 30,000 times as much as that which could be obtained from the same weight of Hydrogen.

It was at first thought that the Radium atom might in some way serve as a channel or focus for a subtle form of etheric activity or energy. If the doctrine of the conservation of energy was not to be upset, the Radium must either be

obtaining its energy in some such manner from an *external* source, or else it must contain the energy *within the atom itself*.

The latter is the explanation which is now known to be true, and we must realise that all this vast amount of energy is stored up within the atoms themselves, and is only liberated *when the atoms break up*.

When that takes place—and it is always taking place with a certain percentage of the atoms—the contents, or part of the contents, of the atom fly off into space with enormous velocity, and it is these flying particles which furnish the energy which appears partly as heat.

For the sake of getting a clear idea, let us imagine our atom to be of the nature of a fly-wheel, revolving with great speed. So long as the fly-wheel holds together all is well, but if it should chance to burst we should have parts of it flying off in all directions, and every part would have a certain amount of energy, depending upon its mass and velocity. Now let us extend the idea somewhat, and imagine that our fly-wheel, instead of being made of a continuous solid material, is really composed of a number of balls which are—compared with their size—at a considerable distance from each other, and that these balls are all revolving in the same orbit, held together by some central force, just as our Sun holds the Planets in their orbits. If these balls were revolving fast enough they would of course give us the impression of a continuous circle of matter, just as one ball attached to a string may be swung in a circle which will look as if it were continuous. Our imaginary fly-wheel would not merely give us the visual impression of a continuous substance, but it would also act as such if we tried to insert anything into it.

If now we imagine that for some internal reason such a fly-wheel were to break up entirely, or only partially; if we imagine that some of the constituent balls are projected out of the fly-wheel, and fly off into space with a velocity corresponding to that which they formerly had when they formed an integral part of the fly-wheel: we shall have a very fair picture of our Radium atom.

As a matter of fact, the fly-wheel—or the Radium atom—does not wholly break up. Some of the balls still hold together and form a somewhat lighter fly-wheel; only this modified fly-wheel is no longer Radium, it is Helium.

But we must turn our attention for a moment to those flying particles which are projected out into space. It is found that these are of two kinds, the one—known as the α rays—having a much greater mass than the others, which are known as the β rays. The α particle has a mass about twice as great as that of an atom of Hydrogen, whereas the mass of the β particle, or corpuscle, is about 800 or 1000 times *less* than that of the Hydrogen atom.

The α particle is principally responsible for the heat which is generated by the Radium. Although the *mass* is small, the velocity is very great, being about 20,000 miles per second. When a flying bullet strikes a target, the energy of the moving mass is converted into heat. But the energy of a moving mass of matter does not vary directly as the velocity, but as the square of the velocity. One bullet moving twice as fast as another will have four times the amount of energy. The α particle of Radium has a velocity about 40,000 times as great as that of a rifle bullet travelling at, say, half a mile per second, and the energy which it possesses will therefore be—weight for weight—1,600 million times as great.

The mass of the β corpuscle is some 1,600 to 2,000 times less than that of the α particle, but, on the other hand, its velocity is very much greater. The velocity of all the β particles does not appear to be the same, but in some cases it may be as much as 120,000 miles per second, which approaches that of light itself, namely, 185,000 miles per second.

We have already seen in our chapter on The Great and the Small that the size of the corpuscle is very small as compared with that of the whole atom, that there are vast interspaces between the corpuscles; but we can now understand, with the aid of our fly-wheel illustration, how it is that the corpuscles practically occupy the whole of the space of the atom. They do so in virtue of their enormous velocity, which we might almost say enables every constituent corpuscle to be practically everywhere within the sphere of the atom at every moment of time, and thus to offer an enormous opposing force to anything which endeavours to penetrate within the boundaries of the atom, represented by the orbits or vibrational limits of the constituent corpuscles.

We do not know what is the central retaining power which holds the corpuscles together within these limits, and

makes of the chemical atom of all ordinary substances such a stable thing ; but we can easily see that so long as the atom does hold together it would act practically as a solid substance, in spite of the vast interspaces between the constituent corpuscles.

The corpuscles cannot be flying about in a haphazard or promiscuous manner within the limits of the atom. They must have definite and orderly movement of some kind, precisely what we do not know, but we might imagine it to be comparable to the ordered movements of the Sun and Planets, held together by the force of gravity.

Such, very briefly and imperfectly sketched, is the new world of activity behind or within the physical atom of matter to which science now introduces us. Strange that the more we penetrate gross ' dead ' matter, the more active it becomes ; strange also that, after having definitely abandoned the *imponderables*, science should be thrown right back upon the imponderable Ether for the explanation not merely of every form of energy, but of the very constitution of matter itself. In the words of Professor J. J. Thomson : " All mass is mass of the ether, all momentum, momentum of the ether, and all kinetic energy, kinetic energy of the ether." [1]

We see, then, that all this phenomenal world, when analysed by scientific methods, is found to have its roots in a Plane of Substance which is altogether beyond the reach of our direct physical cognition and senses ; a Plane which is certainly not *matter* in any physical sense in which that term has hitherto been used. Doubtless it is *matter* in the remote sense that it is something associated with motion, but it is by no means certain that the substance of the Ether itself possesses in any sense the fundamental characteristic of matter, namely, mass or inertia. The corpuscles undoubtedly possess mass, both in the common acceptation of the term as being a quantity of something, and also in the strictly scientific sense as a correlative of force. But whereas in our common experience of what we call matter, the mass is constant whether the body be at rest or in motion, in the case of the corpuscle it appears to be variable at different velocities, and the mass *may be*—and indeed by several leading physicists is considered certainly to be—wholly *electrical* in its nature.

It is well known that any material body in motion and

[1] *Electricity and Matter*, p. 51.

also carrying a charge of electricity, has an additional mass or inertia imposed upon it by reason of that charge, and the induction or strain which is thereby set up in the Ether. Its mass or inertia as a material body is supposed to be constant, so long as it contains the same quantity of material matter, but the addition of an electric charge makes it necessary to use more force to move it; in other words, it has apparently acquired an additional *mass*. But we have added nothing material to it, for electricity is certainly not physical matter, though all physical matter may be electricity.

Now the corpuscle either is, or else possesses, a definite charge of electricity, which is found to be invariable in every case; and its apparent mass *may be* partly material, and partly electrical, or *it may be* wholly electrical, in which case it possesses no mass at all in the material sense of the term, and its apparent mass is wholly due to its motion, to the motion of the imponderable Ether of which it is constituted. Mathematical investigation shows that in this latter case the apparent mass would be practically constant at all ordinary velocities, but would rapidly increase as the rate of motion of the corpuscle approaches that of light. Some such increase has already been experimentally observed, and it is held very strongly by some physicists that the theory known as the 'electronic theory' of matter will receive absolute confirmation in the immediate future, and all matter be thereby proved to be—electricity. By those who hold this theory the corpuscles are called *electrons*.

But when we have called matter 'electricity' we have only given it another name. What is electricity? The answer at present is, that it is some form of etheric activity.

The important point to note is, that we have fairly dematerialised matter, and that although behind every manifestation of matter on the material Plane there must undoubtedly be an *equivalent* of something, however far back we may trace it, so that the two axioms of the indestructibility of matter and the conservation of energy may still hold good in a much extended sense—that equivalent ceases to be 'matter' immediately we have traced it back to the Etheric Plane, and necessitates therefore a profound modification of our ideas as to the fundamental characteristics of that external correlative of consciousness which constitutes for us—in our present state of consciousness—the objective phenomenal universe.

All things are only *things* by reason of the limitations in which we are conscious of them. All matter is similarly only *matter* to a limited form of consciousness. In thought we can already transcend such limitations ; in consciousness we may do so—when we have learnt how ; of which, more hereafter.

Let us note here, however, that all expansion, growth, evolution, both in thought and consciousness, is from particulars to universals, from limitations to an ever widening and deepening inclusiveness. Even in physics this is true, and it is now clearly seen that matter, being the differentiation of an apparently universally diffused Substance or Ether, any conception which we can form as to the nature of that Ether brings us at least one step nearer to that of some universal, undifferentiated Primordial Substance, filling all space, and, therefore, further and further away from any mechanical theory of ultimate dead particles, from the absurd idea that Unity or Reality can be reached by infinite subdivision, or is to be found in absolute homogeneity.

The Reality of a ' thing ' can only be grasped in proportion as its relativity to some larger unitary Whole is understood ; it can never be reached by resolving that ' thing ' into still more isolated and disconnected ' things.' Just in proportion as we fail to grasp the relation of ' things ' to a larger and still larger Whole, so will they possess for us a merely evanescent and transitory nature. They will still be *phenomena* in time and space, appearing and disappearing in an endless sequence of cause and effect ; here before us in palpable, tangible form, yet never really grasped ; forever issuing out of the ' future,' and at the same moment receding into the ' past '—such must they be until we have ceased to isolate them, first in thought, afterwards in actual consciousness ; until we know them in their proper relation and proportion, as part of that Infinite Self which knows them as the correlative, the outer expression and manifestation of Its own Infinite Life and Will.

CHAPTER V

INTER-RELATION OF PLANES

"All the properties of matter are so connected that we can scarcely imagine one *thoroughly explained*, without our seeing its relation to all the others; without, in fact, having the explanation of all."—LORD KELVIN.

CHAPTER V

INTER-RELATION OF PLANES

From what has been said in the preceding chapters it may be hoped that there is now in the mind of the reader a very definite and clear idea of two distinct Cosmic Planes, that of Physical Matter, and that of the Ether; the former being wholly derived from the latter, and, therefore, presumably resolvable back into it in the natural course of cosmic evolution, or devolution.

But the amount of Ether which may be supposed to be thus differentiated or fixed in the form of physical matter is infinitesimally small compared with that vast abyss of space which is apparently filled with the free undifferentiated Ether; and if the importance or otherwise of any special form or manifestation of that underlying Reality which is the Universe could be estimated by its relation to either time or space, we should have to assign to the whole of the material physical Universe a very subordinate position in the Unitary Whole.

Some such conception must, indeed, inevitably dawn upon us when we consider the Cosmos from the point of view of Life and Consciousness; when we consider that these also are at root a Unitary Cosmic Whole, and that just as the free Ether is bound, limited, restricted in its *form* of physical matter, and can then only act and interact *with itself*—the free Ether—in certain limited and restricted ways: so also Life or Consciousness—being in reality Cosmic and Universal—is also bound and limited by the forms and conditions and 'natural laws' of each particular Cosmic Plane of 'matter'; but is, *in its own nature*, something infinitely more than any or all of its limited and temporary modes; whilst that particular individualisation which is our temporary conventional thinking *self*, is also thereby limited and restricted in its action and interaction with Itself, which is none other than the Infinite Cosmic Self.

Some portion of the Ether being thus differentiated or aggregated into Physical Matter, this latter now constitutes a Cosmic Plane which is *apparently*—so far as our physical senses are concerned—a separate distinct independent 'reality'; a 'thing,' a Material Universe, with no sensible connection with that higher Plane out of which it was originally evolved, and to which it is returning by an immeasurably slow cosmic process of disintegration or devolution, of which Radium is a palpable and visible example.

We live immersed in an ocean of air, which, though invisible to us, is evident and manifest in many ways. We breathe it at every moment, and it is absolutely essential to us for the preservation of our physical life and activities; but we take little thought of it on that account, since we have learnt to breathe without conscious effort. It is more apparent to us in the wind which shakes the trees, or raises the dust, or which seems to rush past us as we tear along in our motors and trains.

But we also live immersed in an ocean of Ether, of which we are utterly unconscious, and of which we take no account whatsoever, since it is neither visible nor palpable. Yet it not merely surrounds and envelops us far more closely than the air we breathe, but it literally *ensouls* us. It not merely interpenetrates every bone and muscle and organ and cell of our body, but every molecule and atom, and is the great co-ordinating principle upon which every single phenomenon on the Physical Plane is absolutely dependent.

How do we know this, if the Ether is to our senses absolutely non-existent, immaterial, impalpable, imponderable? The answer is, that physical matter and phenomena are *inadequate to explain themselves*, and we are forced back, by sheer inability to account for phenomena upon any other basis, to some hypothetical medium to which the name of *Ether* has been given. No amount of dissection of the physical body can disclose the existence of the Ether, any more than it can disclose the existence of the Soul; yet the scientist is absolutely certain of the existence of the one, even if he is, as yet, doubtful of the existence of the other.

But the Ether of science at the present time is only related or deduced from purely physical phenomena; its relation to Life, Thought, Consciousness, has not yet been touched. We are gradually feeling our way to a knowledge

of its nature and properties through certain phenomena of matter and force ; presently it will have to be related to the conscious activities of the Ego.

We must recognise, therefore, that Ether, though non-existent for the senses, is an absolute necessity for the mind and reason. No single physical phenomenon can be explained without it. In it we literally " live and move and have our being " ; and if these words are applicable—as they certainly are—to something higher, deeper, more universal even than the Ether, it is because this latter is in its turn only a ' lower ' aspect of that Absolute Noumenon to which all phenomena must ultimately be referred ; and because each ' higher ' Plane stands in relation to the one immediately below it as the direct or immediate noumenon of all its phenomena.

In the meantime, therefore, the Ether stands in relation to physical matter as Soul to Body ; it is the informing vitalising *energy* upon which not merely does every activity of physical matter depend, but which *is* physical matter itself.

Let us note, in the first instance, what science can now tell us as to the action and interaction which goes on between the free Ether—the Etheric Plane as a Plane—and physical matter.

The modern scientific conception of a subtle impalpable ' fluid,' or ' medium,' filling all space, dates back to the time of Newton, and was due in the first instance to the necessity of accounting for the various phenomena of light on some other basis than that of the ' emission theory ' put forward by that great philosopher. Newton conceived that light was of the nature of minute particles shot out with inconceivable rapidity by luminous bodies ; and so ably did he explain many of the then known phenomena of light on this supposition, and also, probably, so great was the weight of his scientific authority, that the ' emission theory,' as it was called, held the field in the minds of many scientists even throughout the early part of the nineteenth century. It was upheld to the last by the great astronomer Laplace, and also by Sir David Brewster, whose name was an authority even fifty or sixty years ago. Singularly enough, the reason which this latter scientist gave for rejecting the ' undulatory theory '— which ultimately established itself in place of the ' emission theory '— was anything but a scientific one. It was, according

to Tyndall, that he could not think the Creator guilty of so clumsy a contrivance as the filling of space with Ether in order to produce light! On this Tyndall remarks: "The quarrel of science with Sir David, on this point, as with many other estimable persons on other points, is, that they profess to know too much about the mind of the Creator." [1]

But even in Newton's time the theory of the Ether was 'in the air.' Newton himself appears to have been feeling after an ethereal explanation of many phenomena, as evidenced in several of the "Queries" at the end of his *Opticks*. It was espoused by the astronomer Huyghens, and the mathematician Euler, but neither of these had sufficient experimental data to prove their theories. The definite demonstration of the Undulatory Theory of Light will always be associated with the name of Thomas Young, who first published his *Theory of Light and Colours* in 1801. Although Young's treatise was bitterly attacked in several quarters, it gradually won the recognition and acceptance of all scientific thinkers.

According to this theory, light consists of a series of exceedingly rapid waves or undulations, propagated through space in every direction by means of the Ether. Thus the existence of the Ether became first established in the scientific mind as an essential factor in the phenomenon of light, and it was, therefore, only natural that the properties or characteristics of this hypothetical medium should be conceived of, or deduced entirely from, the part or function which it was supposed to exercise in the transmission of light waves. Accordingly we find that the first conception of it was that of an absolutely passive, inert, structureless 'fluid,' whose only function was to 'undulate.'

Possibly if the matter had gone no further than this we might have been satisfied with a merely hypothetical medium; deeming the nature of that medium—since it is altogether beyond our senses—to be an insoluble problem. For it was quickly seen that there were enormous difficulties in the way of realising its exact nature and constitution, or indeed of forming any idea of it at all on the basis of anything with which we are familiar in the sensible material world. But it was inevitable that the existence of this medium having been once established, other phenomena besides those of

[1] Tyndall, *Six Lectures on Light*, 1873, p. 47.

light should fall to be included or explained by its presence and agency. There are several phenomena in which one body appears to act upon another at a distance without any visible or recognisable connecting link. The idea, however, of pure action at a distance, without any connecting medium whatsoever, is repugnant to the human reason, and if we see one body acting upon another, however great may be the distance between them, or however obscure or occult the means of communication may be, we must inevitably conclude that there *is* some means or media by or through which such an action can take place.

The most important of this class of phenomena is perhaps gravitation, that power by which all masses of matter are attracted towards each other with a force varying as the square of the distance, and by which the mighty Suns and Worlds are held in their appointed places in relation to each other as they rush through the vast abysses of space.

It is to the Ether, therefore, that we must look for an explanation of the fact of gravitation. But this cannot be given on the basis of a structureless inert 'fluid.' Inert matter in an inert fluid cannot possibly be conceived of as attracting other matter. Moreover, it appears pretty certain that there is no action whatever between the Ether and matter in bulk. The Ether, so far as we know, is absolutely non-existent for masses of matter, that is to say, we cannot lay hold of the Ether, or appreciate anything in the nature of friction or resistance in any mass of matter as a mass; although mass, as measured by *force*, must have an etheric basis. It is pretty certain that when a body moves it does not even move the Ether which permeates it. If, therefore, a mass of matter cannot get some kind of a grip, as it were, on the Ether, if it cannot thrust against it, or be thrust against by it, how can the Ether possibly be the cause or medium of gravitation?

This is one of the problems which science has still to solve. Gravitation must be either a pull or a push; the two bodies which are 'attracted' to each other must either have some connecting rope upon which each can pull, or else must be impelled from behind by some force which pushes them towards each other. This, of course, is speaking entirely from what we know of action and reaction on the physical Plane of matter, and the difficulty of conceiving of the nature of the Ether lies

precisely in this fact, that we have nothing whatever to guide us except physical Plane analogies.

It is hardly to be wondered at, therefore, that the theories as to the constitution or nature of the Ether which have hitherto been put forward to account for a certain limited number of phenomena, have not merely been exceedingly *material* in their nature, but also for the most part mutually contradictory and destructive, not to say unthinkable ; and it remains to be seen whether a substance such as Ether, which is not material at all in any intelligible sense of the term, can ever be explained in terms of physical and dynamical conceptions derived entirely from the purely empirical facts with which we are familiar in the action and interaction of physical material bodies.

But although we cannot lay hold of the Ether by means of any *mass* of matter, we can lay hold of it in another way. As soon as any body acquires a *Charge of Electricity* there is immediately a direct action and reaction between it and the free Ether of space. The body possesses, in virtue of its charge, an *aura* or ' field of force.' It throws out ' lines of force,' as they are called, and by means of these ' lines of force ' it exercises an attraction or repulsion upon neighbouring bodies according to the nature of the charge which it possesses. These lines of force exist wholly in the free Ether, they are some kind of modification or disturbance of the free Ether. Similar lines of force emanate from the poles of a magnet, and their direction or contour may be made visible by laying a sheet of glass or paper on the magnet, and sprinkling iron filings over it.

If, now, we move a body charged with Electricity, it carries its lines of force with it ; but the curious thing is, that even then it does not appear to carry the Ether with it. The lines of force are not, as it were, substantial, even in their own element, although they are undoubtedly formed in and of the substance of the Ether, but when the body is moved, its lines of force move with it *through* the Ether, without anything in the nature of friction or retardation making its appearance—*except when the body is being accelerated or retarded*. It is this exception which is the important part of the matter.

" Nothing in physics is more certain than this, that when a body moves, the ether in its neighbourhood does not move. The ether,

in fact, is stationary: it is susceptible to strain, but not to motion; it is the receptacle of potential, not of locomotive kinetic energy." [1]

"Matter alone has no perceptible connection with the ether, a fact which is proved in my paper in the *Philosophical Transactions* for 1893 and 1897; it is electric charge which gives it any connection, and even then it has no *viscous* connection,—there is no connection that depends upon velocity, or is of the nature of friction,—it is purely accelerative connection; it is only when the charge vibrates, and during its accelerative periods, that it is able to influence the Ether." [2]

The moment we try to set in motion a charged body, or whenever we try to stop the motion of a charged body, or in general whenever we interfere with the motion of a charged body by acceleration or retardation, a certain opposing force makes its appearance, a force which is purely etheric, and which is, as it were, a direct laying hold of the Ether by the body in question. This action is known as 'electro-magnetic induction,' and its operation is such that if we try to accelerate a charged body it opposes such acceleration, and if we try to retard it when in motion it again offers a resistance to our efforts.

Now it will readily be seen that this is exactly the property of matter which is usually termed *inertia*, and we have already noted (p. 87) that a charged body moving through space possesses an apparent mass or inertia greater than that due to its mere physical mass. It may be, however,—we had almost said, it must be,—that what we call the material mass or inertia of a body is in reality wholly due to this specific action of the Ether in the form of electro-magnetic induction, the action being between the free Ether and the corpuscles or electrons of which every material body is built up. The idea is, at least, extremely suggestive, and will probably be fruitful of much in the immediate future.

Now all these phenomena, and many others which cannot be dealt with here, make it increasingly difficult to understand what may be the actual nature and constitution of the Ether itself. Any theory of the Ether to be acceptable must account equally well for all these phenomena: for light, radiant energy, gravitation, electricity, and magnetism, and the constitution of matter itself—and many other things which have not yet come within the range of scientific observation. We cannot accept one kind of Ether to explain light,

[1] Sir Oliver Lodge, "On Electrons," *Journal Inst. Elec. Eng.*, vol. xxxii. p. 47.
[2] *Ibid.* p. 80.

another to explain gravitation, and still another to explain electrical phenomena ; and when physical science has finally elaborated a theory which will more or less fully explain the relations which exist in these empirical and limited phenomena, there will still remain the question of the relation of the Ether to Life, Thought, Consciousness.

In the phenomenon of gravitation and of electric and magnetic attraction and repulsion, the Ether plays the part of an intervening medium between two physical bodies ; we have, as it were, an invisible line or cord in the Ether with a mass of matter at each end. Whenever a body has a charge of Electricity imparted to it, as for instance by rubbing a glass rod with a piece of silk, we always appear to produce two opposite kinds of Electricity, known as *positive* and *negative* Electricity, and whenever a body is charged with Electricity of one kind there is always an equal amount of the opposite kind somewhere—on the walls of the room, or on the nearest material object. The ' lines of force ' which are formed in the Ether connect these two equal and opposite charges, and give rise to what is known as a ' field of force ' between them.

These phenomena, therefore, furnish us with what we might call a closed cycle or equilibrium of energy; in which, although energy is transferred to the Etheric Plane from a physical mass of matter, we find the other end of it, as it were, in another physical mass, and there is no actual loss of energy to the physical Plane, action and reaction being exactly equal and opposite. If we separate two bodies which are held together by the force of gravitation, as for instance when we raise a weight, we have to expend a certain amount of energy, but we get back the exact equivalent of that energy when the weight falls again. The same thing holds good for two bodies attracted to each other by reason of possessing a charge of Electricity. To separate them we must do work, but we can get that work back by allowing them to approach each other again.

If we fire off a rifle bullet into the air, it possesses a certain amount of energy by reason of its mass and velocity. That energy was of course transferred to it from the chemical or molecular energy of the gunpowder. Let us suppose that we fire the bullet straight up into the air, it will then be gradually expending its energy against the force of gravitation, which will presently altogether stop its motion and cause it to fall

back to the Earth. The force with which it strikes the Earth—neglecting atmospheric friction—will be exactly the same as that which it originally possessed when it left the rifle, and, as we have already seen (p. 75), it is converted for the most part into heat. Here, then, we have a complete closed cycle of energy, in which none is lost to the physical Plane—except the heat which is radiated away.

But now let us imagine that the bullet does not return to the Earth, that we can give it sufficient velocity to take it altogether beyond the attraction of the Earth ; what will be the result ? The result will be that the Earth, as a conservative system of force or energy, will have *lost* a definite amount. Note that it will also have lost a definite amount of matter. Let us further imagine that we do not fire one, but a million, or millions of millions of such bullets, none of which return to the Earth ; it is evident that we should not be able to keep this up indefinitely unless we could obtain somewhere for our Earth a fresh supply both of matter and of energy, in some form or other.

Now as an actual matter of fact, although we are not doing this with material bullets, we are doing it—and that much more effectually—in another way. We are doing it by means of radiant heat ; and the phenomena of Radium show us that we are also probably doing it by the actual process of slow disintegration of all matter, and the shooting out into space with enormous velocities of the corpuscles or electrons.

But by far the most serious and appreciable loss of energy is that which takes place in the form of radiant heat. The Earth is continually cooling down, and what we have to note here is, that when heat energy is radiated away into space, we have a case of the entire transfer of that energy to the Etheric Plane, with no apparent means of recovering it—certainly no means of recovering it so far as our Earth is concerned. We have a physical body at one end, and no physical body at the other end.

In the case of our Earth, however, we are constantly receiving a fresh influx in the form of radiant heat from the Sun ; but the energy which we thus continually receive, and that which we lose again, does not form a closed cycle ; the energy which we receive from the Sun is not the same energy —nor even its equivalent—as that which we lose.

The heat energy, or electro-magnetic energy, which reaches

us from the Sun comes *via* the Ether; for the time being, and while it is on its way to us, it exists wholly on the Etheric Plane, which is the *immediate* source of it so far as we are concerned. If we could not see the Sun, and did not know that this etheric activity must be referred back to that body, we should doubtless refer it simply to the Ether itself.

So far, therefore, as our Earth itself is concerned, we are continually radiating heat and losing energy, transferring it to the Etheric Plane, and continually from that Plane receiving a fresh supply, which, however, we can trace further back to a physical body called the Sun. But how does the matter stand with the Sun itself? From whence does that luminary obtain its enormous supply of energy?

The heat and light which our Earth receives from the Sun is an infinitesimal part of that which that body radiates away into space, and which is apparently wasted. It has been calculated that we only receive one 2,300 millionth of the energy which the sun radiates into space; and if the share of all the other Planets were added to this it makes very little difference. The energy which we receive from the Sun in one year would be sufficient, it has been calculated, to melt a layer of ice spread uniformly over the whole of the Earth to a depth of 100 feet, or to heat an ocean of fresh water 60 feet deep from freezing-point to boiling-point. Multiply this by 2,300 million, and some idea may be formed of the enormous amount of energy which the Sun might be supposed to radiate into space every year.

But if the Sun can give out this enormous amount of energy, it must either be receiving it from somewhere, or it must be drawing upon an intrinsic store of its own which will sooner or later be exhausted. The question as to what becomes of all the energy which is thus apparently wasted in space, is a most important one from the point of view of the doctrine of the conservation of energy. There can be no doubt that so far as any particular individual System, such as our Solar System, is concerned, this energy is not conserved. The energy which is radiated away is lost, so far as that individual System is concerned. We ourselves receive a definite amount of energy in the form of light from other Suns lying at immense distances from us in space. The light which we receive from some of them has taken thousands of years to reach us, travelling at the rate of 185,000 miles per second. Some are so

distant that we cannot see their light at all, yet if we make a long exposure of a photographic plate in connection with the eye-piece of a telescope, their light effects a definite chemical decomposition which enables us to recognise the presence of that distant star in a certain position in space. Now that chemical action in our photographic film represents a definite amount of energy, however small it may be; and that energy is evidently an infinitesimally small amount of what that distant Sun is radiating out into space in all directions, just as our own Sun is doing.

Perhaps we might also legitimately imagine that the inhabitants of the Satellites of that far distant Sun are also with their photographic plates — or possibly something infinitely more efficient—fixing some portion of the energy of our Sun, given off by that body thousands of years ago. At all events we have no reason to think otherwise than that, since some of their light reaches us, so also some of our light reaches them, that some—the largest portion, indeed,—of the energy of our Sun is not available for its own System, but travels out and out into space, never to return in that or any other form to this particular System.

So then, since every individual System is thus dissipating its energy more or less quickly and effectually, it must—provided it is only drawing upon its own intrinsic store—sooner or later come to an end of its activities; the Sun must gradually cool down, and, long before it has finally done so, all life and activity on our Earth and the other Planets will have come to an end, the molecular activity of matter itself will cease, and everything be locked in the icy grip of perpetual arctic night.

But is the Sun only using up its own intrinsic store of energy? Science at present gives an answer in the affirmative —we are not certain that it will always do so. It was, perhaps, only natural that the first theories about the Sun should be based upon our common experience as to the necessary conditions for obtaining light and heat, namely, by combustion; and that the Sun therefore should be regarded in the first instance merely as a huge bonfire. Some of the 'scientific' pronouncements of the last century on this matter make very curious reading at the present time (*vide* p. 61), and doubtless the present theories will appear just as absurd in the course of the next hundred years or so. The difficulty

of the old theory was to know where the fuel could come from. Then followed the 'shrinkage theory.' It was considered that the heat generated by a gradual shrinkage in the size of the Sun would account for everything. At the present time Radium has come to the rescue, and the store of energy which might be thus liberated in the Sun, by the actual disintegration of matter, would give an activity to that body for a very much longer period than we can calculate or even imagine.

But periods of time, however infinite they may appear to be to our lesser consciousness, do not count for anything in the eternal duration of the Cosmos as a Whole. We must live in thought outside of all ideas of time and space if we are to reach that Truth of our real inner nature which alone can set us free from the limitations of our present personalities. Although the duration of the Solar System may almost be talked of as an infinitude compared with other periods of time with which we are commonly familiar: that System, *as a phenomenon in time and space,* is, like all other individual time and space phenomona—finite.

This is, perhaps, giving a philosophical rather than a scientific reason for its finiteness, but the scientific reason is equally valid, on whatever basis we take it; and if we fall back upon the disintegration theory, and suppose that energy is being liberated in the Sun by the actual disintegration of Radium, or of other forms of matter—still the time must arrive when that process also will come to an end, there being no more matter to disintegrate.

But the disintegration of matter is its return to its original etheric state or Plane; and so we shall have not merely the *energy* of the Sun returned to that Plane, but the very *matter* itself.

It is, of course, absolutely essential to any material-mechanical conception of the Universe that it should be shown that the energy thus radiated into space as heat, light, or electro-magnetic induction, is *not* lost to the *material* cosmos, or cosmic Plane. If the doctrine of the conservation of energy is to be limited to mere physical forms of energy such as we are cognisant of only in physical phenomena, then it must be shown that all this radiant energy *is* in some way returned or reconstituted in physical Plane matter and activities.

But this is obviously impossible unless we can solve the problem of infinite space on a *physical* basis. It might be that the radiant energy of our Sun, travelling outward into space, might ultimately be all absorbed by some one or other material body ; that in the depths of space are such an infinite number of worlds that no part of it could ultimately escape from the mesh, as it were. But that would be to suppose that our Sun, after all, is at the centre of the Cosmos ; and it would not apply to those Suns which lie on the outskirts—if outskirts there can be shown to be, physically. These latter orbs would radiate their energy out into infinite space without the slightest chance of its recovery. Theories of the limitation of the Ether, and of the curvature of space, have been invented to get rid of this difficulty ; but they rest on no solid ground of experience, and therefore cannot be classed as scientific.

We see, therefore, that the doctrine of the conservation of energy, so far as it rests upon actual experience of physical matter and force, is not merely undemonstrated, but undemonstrable. Why then does the scientific mind, and also all philosophic thought, hold so tenaciously to it ? The answer is quite clear, that we cannot get away from the idea of an *equivalent* in all the changes and transformations which are the very essence of phenomena.

We cannot trace this equivalence in a closed cycle in mere Physical Plane phenomena ; the Physical Plane cannot explain itself. But the moment we dismiss the idea that this equivalence is necessarily of the *same* nature, that nothing but the forces or causes with which we are already familiar on the Physical Plane exist in the Universe, or are competent in themselves to explain themselves ; the moment we cease to look at the Cosmos merely within the limitations of one particular Plane, or of one particular half of its dual aspect of Subject and Object, and regard it from a higher point of view, more especially from the point of view of Life and Consciousness : these difficulties vanish. It is these very difficulties, indeed, which *compel* us to seek for an explanation of phenomena in some higher order of natural law than that which is immediately obvious to our senses. The fact of the gradual dissipation of the energy of the material Plane in the form of radiant heat, definitely rules out of court all attempts to explain the origin or evolution of physical matter,

that is to say, of the whole physical universe, by the operation or agency of any of the processes or laws which we at present recognise as conditioning that universe ; because all material systems tend to run down to a common low level of temperature by reason of the radiation of heat into space, and have already had infinite time in which to do so. There must, in fact, have been " in the beginning " an influx of energy from the higher Etheric Plane ; an influx, indeed, which may still be going on, but of whose nature we are absolutely ignorant. But when we have discovered the nature of that influx, in its immediate relation to physical matter, we have still to account for its existence on the Etheric Plane ; we have, in fact, only put the question one step further back.

There is undoubtedly an equivalent *Substance* behind physical matter, and out of which physical matter is formed ; but that equivalent is *not* physical matter, nor anything like it. Neither can we doubt — though it has not yet been discovered—that there is an equivalent for all the energy apparently wasted in space ; but that equivalent is not necessarily any form of energy which science at present recognises as such, nor is there necessarily a Physical Plane, nor even an Etheric Plane, equivalent.

Physical matter having been evolved out of Etheric Substance, the Etheric is the next highest Cosmic Plane. It is almost certain from scientific evidence that all matter is slowly returning or involving back into that Plane ; it is absolutely certain when we come to regard the matter from a philosophic point of view.

It is our common experience that all individual *forms* are finite ; all phenomena are essentially *change*, and depend upon our consciousness of time and space. It is, therefore, a philosophic axiom that all time and space phenomena are finite ; that which appears in time and space must end in time and space, no matter how long—as we measure time—it may apparently exist without change. As a matter of fact, no single ' thing ' exists for one moment without some kind of modification or change, and sooner or later everything which we can call a ' thing,' everything, that is, which exists in time and space, ceases to be that thing in name and form which we once knew, and its component parts become resolved into something else.

Immediately, therefore, it has been shown that physical

matter is a 'thing,' that it is not a permanent cosmic element, or factor, entirely *sui generis*, but that it is an *evolved* product: it falls to be included as a time and space phenomenon; and, as such, is finite. Not merely the atoms themselves, not merely any particular Cosmic System, but the whole Material Universe must be reckoned as such. In other words, the whole evolution and involution of the whole Material Universe must be looked upon merely as a passing phase in the ceaseless Eternal Life of that POWER whose activity is on *all* the Planes of the Cosmos; whose activity is our own activity; and whose Life and Consciousness is none other than our own Life and Consciousness.

And for this reason, because we, in all our nature, *are* that Self, and in our lesser *self* reflect and repeat the nature and powers of the Infinite Self: so in us also this cosmic process is repeated. The lesser self which we reckon conventionally as 'ourself' takes form and substance in time and space as a physical phenomenon, gathers round itself a material body, and, resulting therefrom, we have the incident of an individualised life, issuing out of subjectivity and returning thereto.

So also do we conceive of the Infinite Cosmic Self, from which we are never really separated, taking form and substance as the Material Universe. What one physical life is to the lesser self, such is—on principles of correspondence and analogy—the duration of the whole Material Universe to that Infinite Self which IS the Universe on all its Planes. The material Universe is only a partial and limited expression in time and space of that Noumenon which neither time nor space can limit or define. Time and space are essentially limiting and individualising factors; they do not reveal, but conceal, and are therefore *illusions*. To reach Reality we must transcend them.

The possibility of the whole of Physical Plane Matter being redissolved back into Etheric Substance is a conception which has hardly yet dawned upon the scientific horizon; yet it is the oldest philosophical conception in the world. The ancient philosophy of the Vedas and Upanishads postulates the gradual evolution of the great Cosmic Planes from Primordial Substance, and its involution back again to its primordial state; the whole process being *periodic*, and known as the 'Days and Nights of Brahman.' This Primordial Substance is the first *objective* aspect—the possibility of an

objective aspect, rather—of that Eternal Noumenon which must ever lie behind and beyond all objectivity, beyond all contrast of subject and object, of the self and the non-self; because it is neither the one nor the other of these, but both.

The point to note here is, that science itself is now demonstrating and forcing us back upon these fundamental philosophical conceptions; and, by disclosing to us the relation which exists between the two lowest Planes of the Cosmos, the Physical and the Etheric, is enabling us to lay hold of certain broad principles of correspondence and analogy which may safely be our guide in reasoning from particulars to universals. Science itself is leading us out of the darkness and negation of matter and materialism, and the limitations of the Physical Plane, and gradually confirming by purely inductive methods, certain fundamental principles of philosophy which appear to be absolutely essential to the mind and reason if we are to regard the Universe as a Cosmos and not a Chaos, as a Unitary Whole in which no single phenomenon or 'thing' can ever be conceived of as standing by itself, or as being a 'reality' in the mere *form* in which we see it; but which, the more we examine it, the more it expands, the more it is seen in an ever-widening relation and proportion, which can stop nowhere short of that Infinite Noumenon which the mind and reason are compelled to accept as the ultimate background of all phenomena, and of all Life and Consciousness.

There are several reasons which we shall advance later on why we should postulate other Cosmic Planes lying beyond the Etheric; but let us for the time being confine our attention to this latter, and conceive that the Ether is really *Primordial Substance*, that it is actually the primal root and source of all *objective* phenomena. There can be no doubt that it does stand in that relation to Physical Plane activities, as the *immediate* source of such; and whatever Planes may lie beyond it, or more interiorly, their action must in the first instance be upon the Ether, and only *through* the Ether upon physical matter.

Now we have already seen that every material body, or system of bodies, from Solar Systems down to atoms, is in the position of a wound-up system or unit. The activity of every material body depends either upon energy continually imparted to it from other bodies, or else upon an intrinsic store of its own which must have been imparted to it at some

time or other. A lump of coal is a familiar example of an intrinsic store of energy. When we have expended that energy by burning the coal, we can no longer get any more energy out of the products of combustion, unless we wind them up again by some chemical process which implies putting energy into them. The coal itself, as we know, was wound up ages ago by the radiant energy of the sun acting upon, and locked up in, tropical vegetation.

But we have also seen that every material body, or system of bodies—and not merely the whole material Universe as a system of bodies, but the very atoms of which those bodies are built up—are in process of running down; and that so, not merely must all the energy available on the Physical Plane be turned into activity of the Ether, but all matter also must return to its Etheric state.

How then did it issue from that state; what was the power which wound up the atoms, and which made each of them, as it were, a little coiled spring, or a little vortex-ring of energy—little in our estimation of size, but with an amazing store of internal energy?

This question cannot be answered by science. The more it is considered in the light of physical science merely, the more it is seen that matter in association with energy—in any form in which we are familiar with these two factors of the objective universe—is unable to wind itself up. The Physical Plane, *quâ* Plane, is not a self-winding clock, but one which is continually running down, and must be wound up by agencies *acting in or from a higher Plane.*

Nor is the question answered when we merely give a *name* to that Power, and call it 'God,' or anything else; or when we say that the Material Universe came into existence by an act of 'creation.' Creation out of nothing is one of the things which may be blindly accepted on authority, but which is absolutely repugnant to the mind and reason.

No question such as this can be considered to be answered except on the basis of something of which we have actual experience. We can only understand "the art of creation" in so far as we can practise that art ourselves; we can only understand what that formative Power is which builds the world of forms, in so far as we ourselves consciously become that Power. At present we exercise that power more or less unconsciously in the building and sustaining of the cosmos

of our own bodies ; presently, when we have learnt to rule our own microcosm, our powers will grow infinitely greater, and we shall share in the conscious activities of that Cosmic Self which to us now, in the limited consciousness of the personal self, appears to be a transcendental Non-Self.

In the meantime it is a legitimate question whether, having discovered by scientific methods the disintegration of matter in the phenomena of radio-activity, it may not be possible that we may hereafter discover by like methods the principle of its formation or integration. The question as to whether science may legitimately hope to know some, if not all, of the factors which have been in operation in the evolution of physical matter out of Etheric Substance, would appear to depend largely upon whether that process is already complete so far as our own System is concerned, or whether it is still going on.

If we are right in our broad principle of cyclic periods of formation and disintegration, applicable not merely to individual ' things,' but to Worlds and Systems, and ultimately to the whole Material Cosmos : then it would appear that so far as our own System is concerned we have long since passed the formative stage, and are now on the return cycle of involution. But it seems more than probable that the Nebulæ which are visible through our telescopes represent some stage or other in the formative cycle of a new System, and it is possible that in the study of these we may ultimately gather much definite knowledge as to cosmic constructive processes.

The doctrine of equivalence—rather than that of the conservation of (physical) energy—forbids us to conceive of the energy which is radiated away into space as being in any sense lost in the whole economy of the Cosmos ; and the moment we conceive of a series of Cosmic Planes, each ' lower ' Plane being formed out of the Substance of the next ' higher ' one—being, in fact, nothing more or less than some kind of a *limitation* of the activity of the Substance of that Plane—we can see that in any particular phenomenon, or any individual System of Worlds, it is not necessary, in order that the doctrine of equivalence should be valid, that there should be an absolute closed cycle of energy or action as between any two Planes.

It is very unlikely indeed that we should ever be able

to trace such a closed cycle in any System which can come under our observation, even in thousands or millions of years. What we can trace is, influx of energy—possibly of matter also—from the Etheric Plane, and efflux back again to that Plane; but we cannot trace this as a complete cycle of the same energy—or even of its equivalent—any more than we can trace the energy which we receive from the Sun back again in a complete cycle to that luminary. We cannot do this even if we suppose the Ether to be the real and ultimate Primordial Substance, and the possibility or probability of being able to do so is the more and more remote as we come to recognise a still 'higher' Plane, out of which the Ether itself is differentiated; and possibly other Planes lying still nearer to the Eternal Noumenon, and still further away from the Plane of physical matter, which represents to our consciousness the greatest degree of differentiation or individualisation.

All that we *do* know, however, all that we can recognise of natural law shows us more and more completely that the Cosmos is built up and governed on great *Universal Principles*, which are operative, *mutatis mutandis*, in the great as in the small; so that we may safely apply to the Whole Cosmos—on principles of correspondence and analogy—processes which we find in operation in the atom and molecule; processes which go on as between Plane and Plane; and, above all, processes which are operative in our own mind and consciousness; for within *Ourself*, and nowhere else, lies the whole Cosmos.

Nothing can ever come out of nothing. For the explanation of physical matter we now find it absolutely necessary to fall back upon a universally diffused, Omnipresent Ether; which may or may not be Primordial Substance; which may or may not in due time be *scientifically* discovered to be still further resolvable into the Substance of a higher Plane.

And just as we are compelled to fall back upon this higher Plane for an explanation of all purely physical phenomena, so also we shall presently find that we are compelled to do so for the phenomena of Life, Thought, Consciousness.

The point to note here is, that in thus passing back from Plane to Plane we do not differentiate, divide, or individualise more and more until we reach a Plane of senseless, isolated, discrete, 'dead' particles, rushing about in space in an

absolutely fortuitous manner: but, on the contrary, we expand, synthesise, universalise, and unify. The old theory of matter never got rid of matter as such. The ultimate particle was still *material*. But a thing cannot be explained in terms of itself, and the ultimate particle theory was simply an *impasse*. The new theory *dematerialises* matter. It may be welcomed as the first step towards a real solution of the problem; but still only a very short step. Individualisation always arises through *limitation*. To resolve all the phenomena of the Universe into mere motion of ultimate discrete particles, void even of the principle of attraction and repulsion which our chemical atoms possess, is *not* to unify all phenomena, but to limit, separate, and individualise to the very last term. It is as unthinkable as an explanation of physical phenomena, let alone life and consciousness, as is creation out of nothing. It is the very antithesis of all Monism or Monistic Philosophy. Even Haeckel, the great champion of materialistic Monism, recognises this, and has therefore been obliged to endow "the two fundamental forms of substance, ponderable matter and ether," with *sensation and will*. We shall deal more fully with this, however, in a subsequent chapter.

Whatever the Ether may be, it is abundantly clear that its *activities* are enormous compared with those of that individualised form of it which we know as physical matter. Compare the rate of propagation of sound waves in air—1,090 feet per second—with that of light waves in the Ether—185,000$\frac{7}{4}$ miles per second. Consider the amazing energy locked up in each atom of matter as disclosed in the phenomena of Radium and radio-activity. Consider the millions and billions and trillions of vibrations—magnetic, electric, luminous—which pass and repass every point of space at each moment of time in the room in which we sit, but of which we are only conscious of a very narrow range—from 395 to 763 million million per second—which we call *Light*, and which constitutes but a single octave of the great Diapason.

We see and know the external world as such and such, simply because we *are* only conscious, through our physical senses, of a limited range of vibrations. Imagine what the Universe would be in our consciousness if we had sense organs to respond to *all* the vibrations which we *know* exist, and pass

and repass in the Ether around us ; or if by other means our consciousness opened out or expanded into the larger possibilities of what we might call a full etheric consciousness.

That such a larger consciousness is a realisable possibility for us, that in actual fact our life and consciousness is rooted in a higher Plane, even as matter and physical phenomena are : we have definite evidence.

And as we fall back in consciousness upon that higher Plane, as we get so much nearer to that Noumenon where all is unified in one Infinite Consciousness, those *limitations* in which we have hitherto lived are seen more and more in their proper relation and proportion ; and we are amazed that we could ever call them, in their mere physical relations, ' the Universe ' ; or that we could ever take such limitations for ' realities ' ; or that we could ever imagine our own Life and Consciousness, our own *Self*, to be other than One with the Infinite and Eternal Self which is the Universe.

CHAPTER VI

PRIMORDIAL SUBSTANCE

"By *Substance*, I understand that which exists in itself, and is conceived through itself; that is, something of which the conception needs for its formation the conception of no other thing."—SPINOZA, *Definitions*.

CHAPTER VI

PRIMORDIAL SUBSTANCE

Up to this point we have been dealing almost exclusively with the phenomenal universe as it presents itself to our normal consciousness, as an external objective reality. We have been dealing with the relation which exists between things in the external objective world, without any consideration of their relation to consciousness itself; and we have endeavoured to follow the discoveries and theories of physical science, in its analysis of this objective side of the universe, to the furthest possible point to which these theories can take us.

We have found that all purely physical phenomena can be resolved into the two factors of matter—or substance—and motion; and we have arrived at a very clear and concise idea of the existence of at least two Cosmic Planes of matter or substance, the 'lower' of which—the Physical—is objective to our normal consciousness, whilst the 'higher'—the Etheric—is not objective, though it cannot properly be termed subjective, because it is an integral and essential factor in the phenomena of the objective physical world.

We have termed the Etheric a 'higher' Plane, because the matter of the lower Physical Plane is evolved out of the *substance* of the Ether; which, therefore, stands in relation to the lower Plane as noumenon to phenomena, as cause to effect, or as substance to matter.

Since the discovery of the absolute dependence of all physical phenomena on the properties and activities of the Ether, there is a decided tendency on the part of scientific writers to materialise the Ether, and even to assert roundly that it *is* matter.

Now this is undoubtedly true in a certain sense, but only if we very much extend our common use and acceptation of the term *matter*, and use it in a generic sense; and it does not

appear to be advisable to do this in the interests of clear and definite conceptions of the constitution of the Universe. It lands us sooner or later in a purely metaphysical definition of matter, and science is supposed to avoid carefully all taint of metaphysics. That it does not, and cannot really do so, however, we shall show later on. It is better, therefore, to restrict the term *matter* to the Physical Plane, and use the term *substance* as a generic one.

The term *matter* means literally 'the producer,' that out of which anything is made; and in this sense anything which is objective to consciousness, anything out of which a 'thing' is made, is matter. Before the discovery of the Ether, the only substance out of which 'things' were known to be made was physical matter; but since we find that physical matter is itself in a certain sense a 'thing,' made out of the Ether, this latter might in that sense be called *matter*. It might also be called matter in the sense that in all probability *things* are formed out of the Ether on its own Plane, things quite invisible to us, as we shall understand better when we have dealt with motion in relation to consciousness.

At the commencement of Chapter II. we have pointed out that if there are such things as *spiritual bodies*, those bodies must in a certain sense be *matter*, in so far as they are *objective* to consciousness. Thus we come to a metaphysical definition of matter as that which is objective to consciousness, on whatsoever Plane consciousness may be functioning. To consciousness acting upon the Etheric Plane in an Etheric body, the Ether would undoubtedly be an objective reality, and as such it would be *matter*. We may point out here that the more it is discovered that the Ether resembles physical matter in very many respects: that it is, for instance, *atomic*, or the equivalent of atomic—that is to say, that it is analysable into discrete particles or portions—that being atomic it is also molecular, or the equivalent of molecular—that is to say, that the atoms can combine to form more or less complex bodies—the more these and other properties of the Ether are discovered, which make it more and more impossible to conceive of it as a simple, homogeneous, undifferentiated substance: the nearer we come to a conception of some further substance, something still further back, out of which the Ether itself has been differentiated or derived; also the more possible it becomes to conceive of true etheric

bodies, serving as the vehicle or habitat of conscious intelligences; also that we ourselves possess such etheric bodies, which serve as the subtle vehicle of consciousness, and the matrix upon which the physical body is moulded and built up. We shall deal with this, however, more definitely when we come to consider the question of abnormal states of consciousness, and psychic phenomena in general.

In the meantime it appears advisable to limit the term *matter* to that Plane on which we are normally conscious. Moreover, it does not appear to be exactly logical on a purely physical basis to say that Ether is matter. We cannot describe a root substance in terms of something which is derived from it. We cannot call oxygen, *ozone*; though we may call ozone, *oxygen*. We cannot call Ether, *matter*; though we may call matter, *Ether*. It appears, however, more likely at the present time that we shall have to call matter, *electricity*, before we call it Ether; the order of limitation or involution of motion being—Ether, Electricity, Matter.

The Etheric Plane, considered as a Plane of consciousness, is evidently quite distinct from the Physical Plane. We have at present no consciousness of etheric objects, and it will be time enough to call the objects on that Plane *material* when we can sense them as objective forms, or when we have fallen back upon that ' subliminal ' or ' cosmic ' consciousness which belongs more particularly to the higher Planes of the Cosmos.

For the present, therefore, it appears best to speak of the Ether as *substance*. The term *substance* means literally that which sub-stands, that which stands under or underlies anything. Equally with the term *matter* it is that out of which anything is made, and in this sense we shall very correctly speak of Ether as being the substance of matter. Every ' higher ' Plane will be a Plane of *substance* to the *matter* of the Plane immediately below it.

It appears now to be a philosophical necessity of thought that there is some ultimate Substance which is the Root or Source of all phenomena, however many Planes may really exist in the Cosmos, or be interposed between our Physical Plane and that ultimate Substance.

We shall term that ultimate Substance, *Primordial Substance*.

The present Ether of science may or may not be that

Primordial Substance; we may reserve that question for later consideration. In any case, it appears to be absolutely necessary that we should have some simple unitary concept of the ultimate and unchangeable ground or basis of all phenomena, and that ground we shall find in the definition which science at present gives of the Ether. Let us now, therefore, endeavour to see clearly what is the position of modern science in this matter, and what are the logical deductions which we must make from the principles which science puts forward as fundamental and unchangeable truths.

There are two views which we may take of the ultimate Substance which lies at the Root of the phenomenal Universe. The first is the *atomic* view, the conception that there is, after all, an ultimate *material* (extension in space) atom, a hard indestructible particle, irresolvable and indivisible; and that all phenomena are caused by motions and impacts of these ultimate particles. We have already sufficiently discussed in Chapter IV. the *impasse* into which this leads us, and as it is now very generally rejected in favour of the alternative view, that of a *continuous medium*, we need not discuss it further. In the words of Sir Oliver Lodge: "We cannot go back to mere impact of hard bodies after having allowed ourselves a continuous medium." [1]

We have to conceive, then, of an absolutely continuous, homogeneous, undifferentiated Substance, filling all space. For a clear presentation of this concept we may again quote Sir Oliver Lodge.[2]

"I have now endeavoured to introduce you to the simplest conception of the material universe which has yet occurred to man—the conception, that is, of one universal substance, perfectly continuous and homogeneous, save for its structural constitution, extending to the furthest limits of space of which we have any knowledge, existing equally everywhere; all at rest as a whole, but endowed with such intrinsic motion as enables it to transmit the undulations which we call light; other portions in a still more special state of rotational motion—in vortices or something equivalent—and differentiated permanently from the rest of the medium by reason of this motion.

"These whirling portions may indirectly constitute what we call matter; their motion gives them rigidity, and of them our bodies and all other material bodies with which we are acquainted may be built up.

"One continuous substance filling all space: which can vibrate as light; which, under certain unknown conditions, can be modified or analysed into positive and negative electricity; which can constitute

[1] *Modern Views of Electricity*, 3rd ed. revised, p. 385. [2] *Ibid.* p. 386.

matter ; and can transmit, by continuity and not by impact, every action and reaction of which matter is capable. This is the modern view of the Ether and its functions."

This is doubtless the " modern view " of the Ether, in so far as this Ether may stand for Primordial Substance, the root substance of the Universe. But modern views are very apt to be considerably modified in the course of ten or twenty years. And, by a curious paradox, the more modern they become the more ancient they become ; they fall more and more into line with certain fundamental principles which are to be found in the most ancient of philosophies. We venture to suggest that one of the modifications to which this " modern view " of the Ether will be subjected, will be the discovery that the Ether of science is only *one* remove from the more complex differentiation of physical matter; and that the true " universal substance " must be looked for on still higher Planes lying beyond the Etheric. The quotation we have given, however, is an excellent presentation of the fundamental principle or concept of the unity of all *objective* phenomena in one ultimate Substance, which is thus the Noumenon of all phenomena. But so far as we have now taken it, it leaves out of account the phenomena of life and consciousness ; phenomena which are really more fundamental than those of matter and force ; and we shall have to endeavour to include these also in our concept of Primordial or Absolute Substance.

The Unity of the Universe in one Absolute Principle, which, regarded objectively, is Matter or Phenomenon, and subjectively is Life and Consciousness—such is the concept with which we have now to deal, and which must form the foundation of all our science, of all our philosophy, and of all our religion. In that one Principle, all extremes meet. It is the keynote, the fundamental under-tone of all that vast Symphony which we call *Nature*. It sustains all the harmonies and resolves all the discords. All phenomena are simply harmonies or over-tones of that one fundamental note.

We must disclaim at this point all intention of involving our readers in the mazy intricacies of formal or academic metaphysics. It is our belief that these fundamental principles can be presented without any reference to the innumerable and mutually destructive systems of philosophy or religion so-called, which have obtained more or less authority

at various times. We believe that the principles we are now advancing will be found to be more or less common to all the great world-religions, when questions of detail, of the how and the why, over which strife and contention has principally arisen, have been eliminated.

We shall, therefore, make no attempt to inquire into the exact significance or validity of the concept of an Absolute. To do so would be to write a history of philosophy. We must be satisfied with the fact that the terms Absolute and Infinite stand for that final Unity, which, though a necessity of thought, must necessarily be incomprehensible to our present limited consciousness. However little we may be able to explain why it is so, the fact remains that Absolutism in some form or other is the distant point of sight to which all lines of thought converge, alike in science, in philosophy, and in religion. The absence of that point of sight in our mental picture of the Universe, and a failure to relate all lines of thought thereto, makes it like a Chinese picture, devoid of all perspective and of proper relation and proportion.

The Absolute is the—at present—unknown, but not necessarily the unknowable. Unknowable to our mere personal consciousness, to anything which is limited or conditioned, perhaps IT is and ever must be. To know IT we must realise our oneness with IT; and to do that we must throw off the limitations of mere individual life.

And why should we not realise that *oneness* which we can and do already postulate as a necessary intellectual concept. To postulate that we shall *never* know IT, shall never realise our oneness with IT, we must postulate some arbitrary limit to that evolutionary process which has led us up through the vast strife and effort of the past, from the lowliest forms of consciousness, even from the apparent unconsciousness of matter itself to our present powers and apprehension of our real illimitable nature in its oneness with the Whole Cosmos. The illimitable past is our pledge and guarantee of an equally illimitable future. We shall claim that future as our own in precisely the same terms as we claim the past.

When we have apprehended what it is which changes, and what it is which is unchangeable, then perchance we shall find that past, present, and future are also ONE.

Science offers us the concept of an Absolute as *Matter-Substance*, forming the substratum of motion; and, as such, the basis of all phenomena; that out of which all 'things' are made.

Philosophy offers us this concept as that of one Unitary Consciousness, *in* which all phenomena arise and inhere.

Religion—in the highest and best sense—deals with this concept as that of One Divine Life, in which we live and move and have our being; and to know which—not as intellectual knowledge merely, but as a conscious realisation of identity therewith—is Life Eternal.

It is not so much the bare concept of an Absolute, as the attempt to define IT, to give IT qualities and attributes, which is the subject-matter of contention as between one system of 'truth' and another. It is not the mere assertion that IT *is*, but the assertion that IT is this, that, or the other—to the exclusion of its opposite—which leads to controversy and strife.

In philosophy the difference between one system and another is mainly in the way in which the duality of Subject and Object—which is the empirical fact of our present experience—is conceived of as being synthesised in the Unity of Absoluteness.

It is extremely difficult to find a convenient term for this Ultimate Principle. All words are merely symbols representing certain concepts. If we call this Absolute Principle "God," we find the term too theological, and we are obliged to reject much which has hitherto been associated with this term. There is no virtue in giving IT a name, such as Jehovah, or Brahman. Although these two are practically the same, they conjure up very different ideas in the mind of the Jew, the Christian, and the Hindu respectively. Further, Jehovah and Brahman are neither of them the Absolute "God," as is well known to the initiated Jew and the philosophical Hindu. The *Alhim* of the first chapter of Genesis is an earlier and superior Power to the *Jehovah* of subsequent chapters; whilst the learned Kabalist has the *Ain Soph*—the No-thing, the Nameless—as the Absolute Principle.

The Hindu, again, has Parabrahm—beyond Brahman—as the Absolute; Brahman Himself, as the *personal* Creator, being only relatively eternal and immortal, *i.e.*, only for the period of a certain cycle of evolution.

We shall, therefore, simply use the term Absolute or Noumenon to express this Unitary Root Principle which is the Universe, both Subjective and Objective.

If we call this Absolute Principle, Universal or Primordial *Substance*, we are apt to have a far too material idea of It in our mind, as if It could exist as an independent Reality apart from Life and Consciousness; this idea arising from our common conception of matter as being 'dead.'

Strictly speaking, Primordial Substance is only the *objective* aspect of the One Absolute Noumenon, the *subjective* aspect being Consciousness, which of course can never be an *object*.

Nevertheless, since we must conceive of Consciousness as inhering in *something*, we may term that something Primordial Substance, in the sense of that which sub-stands both subject and object.

With the philosophical and religious aspect of this duality we shall deal in subsequent chapters; at present we must round off our scientific concept of Primordial Substance, and understand clearly some of the logical deductions which result therefrom.

We may note, in the first place, that Primordial Substance Itself—as scientifically defined—can have none of the characteristics or qualities which we usually ascribe to matter, even in the remotest physical sense; and, therefore, whatever it actually *is*, it certainly is *not* matter.

Matter is essentially discrete, discontinuous in space, atomic; Primordial Substance is homogeneous and continuous in space. It fills all space. We are told by physicists that the fundamental characteristic of matter is mass or inertia. Primordial Substance *per se* can have neither of these, for it is incompressible, inextensible, and frictionless; mass or inertia being only secondary, or many times removed effects resulting from certain forms of its motion.

We are told by metaphysicians that the fundamental characteristic of matter is extension in space. But Primordial Substance has no parts which can present the appearance of extension in space. Being absolutely continuous and homogeneous, filling all space, it has absolute extension in space, and absolute extension in space is no extension at all. Extension in space is the essential characteristic of an *object*, of a 'thing.' A perception of extension in space implies some kind of limitation, it implies a boundary to the thing

perceived. But an object which occupies all space has no limitation and no boundary; it is no *object* at all. There is nothing with which to compare it, unless indeed we can conceive of more than one absolute, or of more than one 'thing' occupying absolutely the same space.

It would thus appear that we have to define Primordial Substance rather by what it is *not* than by what it is. We have to assign to it what we might call negative qualities. It is impossible to give to it any positive qualities if we consider it merely as Substance forming the substratum of motion. Looked at in that light only, as a mere hypothetical medium out of, or in which, phenomena arise merely by differences of motion, its very essence is the privation or negation of all qualities. For, the moment a quality makes its appearance, we have contrast and differentiation, we have the commencement of phenomena, we have that which by definition Primordial Substance is *not*. Primordial Substance is not itself phenomena, but the *Root* of phenomena. Phenomena arise in it by differences of Motion.

From this it follows, in the second place, that Primordial Substance itself is immutable and unchangeable. It is absolutely the same at every point of space—*and eternally remains so.*

We must understand clearly that Primordial Substance does not *become* the 'matter' of any of the lower Planes. Primordial Substance being incompressible and inextensible, can be neither differentiated nor densified; there can never be *more* of it at one point of space than at another.

Matter is conceived by modern science to be a whirl or vortex in and of this homogeneous, continuous, perfect medium. But we must carefully note that such a whirl or vortex could not be a direct object of perception in any physical sense, for the reasons we have already pointed out (p. 77). We may understand this better, however, if we consider that, when we set up vortex-rings in air or water, we cannot perceive them unless we associate them with something which has some characteristics which are different from the medium itself in which they are formed. Thus we may make a vortex-ring in water with a little coloured liquid, or in air with a little smoke; but only under such conditions do they become perceptible objects.

It follows from this that the commonest fact of our

empirical knowledge of matter, the fact of density, is the purest illusion so far as we attribute it to substance itself. Primordial Substance cannot be densified; it occupies all space equally, and at all times. Density, like mass, and all other *characteristics* of matter considered objectively, is a mode of motion, and not a mode of substance. Nevertheless, there may be considered to be a real external or space validity in the perception of density, such reality consisting in the greater or less proximity of the vortex-rings. Thus *solid* matter, though not really more solid *as substance* than anything else, yet consists of a closer combination of vortex-rings.

The densest metal, the rarest gas, the solid objects we touch and handle, the air we breathe, the impalpable Ether itself, and the still more impalpable 'matter' out of which our thoughts are formed—all are equally substantial, or equally unsubstantial; for all alike *are* this one immutable, unchangeable Substance. All those differences and contrasts which go to make up the infinite variety of the external phenomenal universe, are differences and contrasts of motion only; distinguished as such, and assigned their value and qualities, by that underlying Principle which we call Consciousness. We shall deal with this more fully in our next chapter.

Let us clearly understand, however, that there is no illusion in any *fact* of consciousness. The illusion lies, not in the fact, but in our interpretation of the fact; in our giving to the fact a false relation or proportion. There is no doubt whatever, for example, that people do see 'ghosts'; yet, although apparently objective and even material, such an appearance might be a pure illusion so far as its physical or apparently material nature was concerned. We may see a figure in a looking-glass, and possibly—not knowing the glass to be there—we may take it for a real object located in space in front of us. There must have been a real object somewhere, otherwise we should not have seen the reflection. The illusion does not lie in the object, but in the location which we give to it in space—or consciousness.

Matter is an illusion in just this sense. There is no doubt that we do see matter, and we are compelled to use the common conventions of language if we would speak in intelligible terms to our fellows. Nevertheless, matter is no more real, or no less real, *as substance* than the ghost or the

reflection in the looking-glass. What we really sense is a different order of motion of one and the same Substance. There is a reality behind all these appearances, but not a time and space reality such as we commonly ascribe to them.

This is not metaphysics, it is science; and by thus postulating an absolute Substance at the root of all phenomena, science itself shows us the way to the highest form of Idealism. Science discloses to us more certainly than anything else the false 'reality' of the mere appearance of things. Nothing can take us further into the realms of transcendentalism, nothing can show us more clearly that things are *not* what they seem, than this fundamental concept of Primordial Substance.

Realism as opposed to Idealism is the concept that things *are* what they seem; and it has been the wont of scientific writers, especially of the materialistic school, to scoff at all Idealism, and to base 'reality' upon the mere empirical facts of our present consciousness, of our common experience, and to sneer at all metaphysical concepts. Nothing, however, can be more metaphysical, nothing can be more *beyond* the physical, beyond the reach of all physical analysis or definition than Primordial Substance. We shall see this more clearly in our next chapter, where we shall consider its relation to life and consciousness.

Intermediate between the crude Realism of Materialism and the purest form of Idealism, there is a point of view which was termed by Herbert Spencer "Transfigured Realism." In *Principles of Psychology*, vol. ii. p. 494 (3rd ed.), we read :—

> "The realism we are committed to is one which simply asserts objective existence as separate from, and independent of, subjective existence. But it affirms neither that any one mode of this objective reality is in reality that which it seems, nor that the connections among its modes are objectively what they seem. Thus it stands widely distinguished from Crude Realism."

It affirms, in fact, that the objective world does exist as a reality, that it is not a pure creation of 'mind,' or exists only as an *idea* in mind. On the other hand, it recognises that the mind has a very important share in the making of that objective world what it *appears* to be. As an intermediate view between Crude Realism and pure Idealism, this might perhaps be as well termed *Modified Idealism* as "Transfigured Realism."

To suppose that we can completely know any 'thing'

short of absoluteness is manifestly absurd ; for it presupposes that a point can be reached where the thing stands by itself, complete in itself, with no cause but itself, and without any further relation to anything else.

But this is precisely Spinoza's definition of *Substance* ; and we cannot conceive of two or more such Substances, or absolutenesses, in the Universe.

We see a ' thing ' in a certain limited relation and proportion, and we then call it a physical object. If we could see it in its *etheric* relations and proportions—which we know certainly and scientifically do exist—it would be quite another ' thing.' Any particular thing can, in fact, only find its complete explanation in the Whole ; and it is only of that Whole—the Infinite or Absolute—that complete and unrelated self-existence can be postulated.

But if this be so, if we never really see and know a ' thing,' but only some limited aspect or relation : we can understand clearly that it is not our knowledge or perception which has adapted itself to the thing—which is moulded upon or arises from the nature of the thing as a ' thing,' as scientific Realists would have us believe—but, on the contrary, it is the ' thing ' which has adapted itself, in our mind, to our limited powers of perception.

It is only one step from this position to that of a pure subjective Idealism ; to the concept that ' things ' are the product of the mind or consciousness, and have no real valid existence of their own outside of consciousness.

There is only one ' thing ' to be known in the Universe—the Infinite or Absolute. But, in itself, THAT is no ' thing.' It is seen and known in all things, in an infinite universe of phenomena—or rather, It sees and knows *Itself* thus.

Primordial Substance, from the point of view of physical science only, is the hypothetical substratum of motion, in so far as we are unable to conceive of motion apart from something which moves. The present scientific category of motion, however, is a somewhat limited one. It appears to be confined to vortex-rings, whirls, knots, or strains in the Ether, undulations and vibrations ; with possibly ' Faraday tubes,' or ' lines of force ' thrown in as something " somewhat different " from any of these. We are not concerned now, however, with the detailed motions of Primordial Substance which give rise in our consciousness to the varied

sensations of light, colour, sound, matter, etc. We are concerned in the first instance with fundamental principles, and the logical deductions which we must make from those principles which science now offers to us.

We may accept for the time being, and in order to grasp those principles as clearly as possible, the somewhat crude image which the scientific imagination conjures up of physical matter; and we may represent it to ourselves as consisting of more or less complicated aggregates or systems of vortex-rings of Ether, the physical atom being built up of some simpler aggregate to which the name of *corpuscle* or *electron* is now given; this corpuscle having, as we have already seen, replaced the old indestructible atom as the ultimate or smallest known unit of *mass*.

Apart altogether from the question as to what particular kind or form of motion of the Ether these corpuscles may be, the principle which we have to grasp is simply this: that there are certain etheric units or atoms, probably themselves of a very complex nature, out of which physical matter has been evolved by aggregation or combination, and into which physical matter is being slowly reinvolved, so that in course of time it is possible that there may be no physical universe at all.

We must carefully bear in mind that this combination of etheric atoms to form a physical atom is in no case a densification of the Ether; it is simply a combination into a system of motion. It is a curious thing that mathematical calculations go to show that the transparent impalpable Ether, in which we live and move all unconsciously, has a density which is "immensely greater than that of any known substance."[1]

The combination of etheric atoms which goes to form any physical atom is essentially one of motion. Every individual constituent of the atom is in intense orbital or vibratory motion. The unitary etheric atoms or corpuscles are held together in their orbits into one system by some unifying force which has not yet been discovered, but which is supposed to be of the nature of a positive charge of electricity. The corpuscles themselves consist of a definite charge of *negative* electricity; and as we have no knowledge of the one kind of electricity ever existing without its exact equivalent quantity

[1] J. J. Thomson, *Electricity and Matter*, p. 51.

of the other kind or 'sign,' we have to conceive that somewhere within the atom there exists an equal charge, or number of units of *positive* electricity corresponding to the number of units of *negative* electricity existing as corpuscles or electrons. Whatever this unifying force may be, however, we find that the constituent particles of the physical atom are held together as one system of motion, within certain limits or bounds, which constitutes the effective area or sphere of influence of the atom. When for any reason the attractive force which holds the system together is partially or wholly destroyed, we have the break-up of the system, or physical atom, as is seen in the phenomenon of Radium.

Now we have to note that it is not merely the constituent etheric atoms or corpuscles which are thus liberated, but that their liberation involves the liberation of *motion*, of an enormous amount of *energy*. The motion of the etheric atoms is no longer limited to the confines of the physical atom, but becomes a free motion in space, which, as we have already seen, in some cases approaches the velocity of light itself.

We may regard the physical atom, then, as an aggregate of vortex-rings, simply for the sake of obtaining some definite idea of the *principle* involved—the particular form of motion not affecting the general principle that all 'matter,' on whatever Plane, is not a densification of Primordial Substance, but only a more or less complex aggregate of some simpler form of motion. Thus if we regard physical matter as the *most* complicated aggregate—in other words, as the lowest Plane of the Cosmos—we shall have to conceive that these aggregates of vortex-rings become less and less complex as we pass from the lower Planes to the higher, so that we shall finally have a simple vortex-ring as the ultimate or primordial atom. Some such ultimate atom is, indeed, now mooted by science, to take the place of the old ultimate indivisible particle; and at the present time it seems to be regarded as a *sine quâ non* that this ultimate vortex-ring should be eternal and indestructible in its nature, for the simple reason that motion must apparently be conserved in some kind of ultimate form, otherwise what becomes of the doctrine of the conservation of energy?

We have already seen that, when the physical atom is broken up, the free corpuscles or etheric atoms possess motions which are incomparably more rapid than those

of the physical atoms into which they were previously aggregated; and we thus learn that it is the essence of the matter of a 'lower' Plane that it consists of, or is characterised by, a *limitation* of motion. Conversely, as we pass to a 'higher' Plane we obtain conditions of motion which are almost immeasurably greater in their freedom from limitations than those which obtain on the lower Plane.

As an illustration of what this involves we may take an example of wave motion. If we throw a stone into a pool of water we can watch the undulations on the surface of the water gradually spreading out in concentric circles. After several seconds we shall have a series of such circles forming a distinct object on the surface of the pool: an object which is continually growing larger and larger as the wave motion travels outwards and onwards. Still, it takes a considerable time for such a series of waves or ripples to travel, say, 100 feet from the centre of disturbance.

Now let us take an analogous case of etheric disturbance. Instead of our stone thrown into a pool we will take a flash-light, which we will suppose to last exactly one second. We will also suppose an observer on the Etheric Plane who can see the light waves in the same way in which we can see the ripples on the water; although the light waves will, of course, travel outwards in all directions, and not merely on a plane surface such as that of our pond. Thus the etheric object produced by the flash-light would be a sphere of waves. The moment the flash-light commences, these waves begin to travel outwards at the rate of 185,000 miles per second, so that at the end of one second, when we suppose our flash-light to cease, the first waves would be 185,000 miles away, but the last waves would just be starting from the centre of the disturbance. Thus the phenomenon which would be presented to our imaginary observer on the Etheric Plane would be an object consisting of a series of waves or ripples 370,000 miles in diameter. Like our ripples on the surface of the pool, our etheric waves continue to travel outwards. At the end of the second second the first waves would be 370,000 miles away from the centre, and the last waves would be 185,000 miles away, so that the object would now be a concentric shell of waves 185,000 miles thick, with a total diameter of 740,000 miles, and a hollow interior 370,000 miles in diameter.

We need not follow it from second to second, nor even

from year to year. Those who wish to stretch their imagination to any extent may ask themselves what this 'object' would be at the end of one year, at the end of a hundred years, or of the thousands of years which science tells us are required for light to reach us from some of the distant stars.

But in truth this is not a matter of imagination—it is sober scientific fact. It is not merely the light of our Sun, and of countless other Suns in space, which is thus travelling out in infinite circles at every moment of time into infinite space—all these infinite circles crossing and recrossing each other, yet each preserving its individual characteristic—but at every moment of time the countless billions of atoms which go to form any particular object of physical matter—the pen I hold, the book you read, every single object which we see or feel—are sending out at every moment these electro-magnetic disturbances of the Ether, which travel out and out into space with—so far as science can tell—unending motion. Were it not that they are doing so, we could neither see nor feel them, nor sense them in any way; for it is only by and through these etheric motions that matter possesses for us its characteristic qualities.

But the question as to whether all these etheric waves and ripples do really travel out into space unendingly, and without any diminution whatever in their energy, is one which cannot be considered as closed, and which cannot really be shelved, even though at present it is impossible to prove anything to the contrary by actual physical demonstration. The ripples on our pool die down gradually, their motion is converted into heat, into the very form of etheric activity, indeed, which we are considering. Do our light and heat waves also die down, are they in their turn converted into some more subtle form of energy on some Plane higher than the Etheric? All analogy would seem to point to such a conclusion. It is impossible for us to conceive of them as travelling out into space eternally. Such a conception is not merely fatal to the modern doctrine of the conservation of energy as applicable to the *whole* Universe—in which motion or energy must necessarily work in a *closed* cycle—but it is fatal to any *Unitary* concept of the Universe at all. Such a Unitary concept can only complete itself in Absoluteness. Little as we can understand Absoluteness, it is still a definite and positive idea, whereas that of Infinitude is a mere negative

one implying the absence of limitation. We may resolve motion into Absolute Motion, but we cannot leave it open, as it were, to an infinite journey, unrelated to anything else in the Universe.

The solution, therefore, which we here suggest is that of conversion in space into a higher form of energy on a Plane or Planes lying beyond the Etheric. It is quite understandable—in view of the almost infinite extension of phenomena on the Etheric Plane, of which we have just given an example—that we should be absolutely unable to detect any such conversion—of light, for example—into any higher form of activity within the limits of space to which we are confined by our physical senses. Light may very well travel for thousands of years without any diminution which we could possibly detect, although every single undulation might in reality be giving up something of its energy at every moment to a higher Plane. To those who are aware of the extremely subtle nature of the forces and forms of etheric activity with which we now deal experimentally in the phenomena of radio-activity; of the almost infinitesimally small quantities of matter which can now be detected by means of the electroscope; of the minute yet constant disintegration of matter, of the physical atom, which goes on in radio-active substances, and probably in all matter, so that although we know the process to be going on, and even in a certain way are able to measure it quantitatively, yet we are absolutely unable to detect any diminution in the mass or weight of the substance which is thus disintegrating—those who are familiar with these facts will have little difficulty in accepting the proposition that there must certainly be finer forces in nature which as yet lie absolutely beyond even the furthest stretch of our imagination. Radium has taught us that, if nothing else.

We must dismiss from our minds all conventional ideas of the great and the small when we are dealing with such questions. That which to us is of infinite extent, the limits and confines of our own vast universe, is but the boundary of a single atom in the Infinite Whole.

But the principle which we deduce from these considerations is clear and unmistakable. Every rise from one Plane to another is a throwing-off of limitations—limitations of space, limitations of time, limitations of motion, of matter, of energy; and, we might add, of consciousness. On each

higher Plane these are transcended more and more, because at every remove we come nearer and nearer to that fundamental Unity in which all limitations finally disappear in Absoluteness. The bound motion of any one Plane becomes free motion on the next higher Plane, and appropriates to itself, as it were, vast expanses of space. The process cannot end anywhere except in Absoluteness. The ultimate motion of Primordial Substance—when all individual or differentiated forms of motion have been resolved back into THAT—is Absolute Motion ; as little understandable by us as Absolute Substance, yet as absolutely necessary as a mental concept.

We must note that if—as a concession to our conventional idea of time and space as realities—we postulate that in the great rhythmic process of evolution and involution which constitutes the phenomenal universe, or the great world process, Absolute Motion *becomes*—in consciousness—limited motion : we must still reserve the idea that it is only a portion, so to speak, which thus manifests as phenomena, because, as we have already pointed out (p. 91), it is only a portion of the substance of any higher Plane which becomes the 'matter' of the next lower Plane. Thus every Plane has its own special activities which are infinitely greater than those of the lower Plane ; the activities of any lower Plane being, as it were, only an *accident*, an *incident*, a happening, in the history of the higher Plane.

With the further concept that Absolute Motion never really becomes limited, just as Absolute Substance never becomes differentiated, but remains unchangeable and eternal —we shall not at this point trouble our readers.

If we consider physical matter to be a complex of vortex-rings which, when liberated from each other's influence, are found to be less complex systems constituting what may be considered as true etheric atoms, but still of a complex nature ; and if, again, we suppose these to be further resolvable into simpler atoms on a still higher Plane, and so on : we shall at last reach a single simple vortex-ring of Primordial Substance —the ultimate atom of the whole Universe. The activity, the motion, of that primordial atom must be *almost* absolute. Absolute motion of a body is the presence of that body at every point of space at every moment of time. We have seen that the motion of a corpuscle within the limits of an atom is almost analogous to such motion ; and, therefore, in extending

the idea to the primordial atom we are only applying to the infinitely great what we apprehend in the infinitely small. The real atom, that which cannot be divided, the Monad, the ONE, *is* the Absolute Primordial Substance.

Whether we regard the primordial atom—the first form of limited motion, whatever that form may be in reality—as immutable and indestructible, as scientists seem inclined to postulate; or whether we adopt the more philosophical and logical view, that that also—being *phenomenal*—has its period of objective existence followed by a period of subjective existence—that is to say, that it is, as a time and space phenomenon, like everything else in time and space, *periodic* in its manifestations—whichever of these views we may adopt, the principle which we are now enunciating remains unaffected; that principle being the purely scientific one: namely, that motion is conserved; and that all Cosmic processes, being *cyclic* in their nature, in accordance with the firmly established principle of evolution—*motion must return to its source.*

Bearing in mind the dogmatic assertions as to the indestructibility of the physical atom which were in vogue not ten years ago, we must regard with suspicion any attempts merely to throw that dogma further back upon some other time and space atom. But in any case we are, in the concept of an ultimate primordial atom, only one remove from Absoluteness. Let us suppose the primordial atom itself to break up—we are then in the region of Absolute Motion, Absolute Substance, Absolute Consciousness.

It is not our intention here to deal with the validity or otherwise of any of the scientific theories which are at present current as to the particular mode or form of motion which constitutes any particular phenomenon. The present guesses as to the nature and constitution of the Ether are admittedly crude and unsatisfactory. Any attempt to deal with it on the basis of physical and mathematical principles which are applicable to our present Plane of consciousness, appears to land us in a veritable *impasse,* and a series of mutually destructive propositions. How, for example, can the Ether be *denser* than any kind of physical matter, and yet be absolutely unsubstantial to us? How can it be *strained* if it is incompressible and inextensible? If it has *none* of the properties of physical matter, what can we possibly conceive it to be? Whenever we try to deal with it on the basis of some physical

analogy, to impute to it some properties—fluidity, rigidity, elasticity, etc.—such as we are familiar with in physical states of matter, we are inevitably led by one phenomenon or another to the conclusion that, whatever else it may be, it cannot be so and so.

About thirty years ago Helmholtz investigated mathematically the properties of vortical motions in a hypothetical perfect medium or ' fluid ' ; and he showed among other things that a vortex-ring once set up in such a medium—which among other *negative* qualities would have to be considered as frictionless—would be permanent, and could not in any way be modified or transformed. On the other hand, there is no known way in which such rings could be formed at all in a frictionless medium ; nor can we understand how such a ring could act upon the surrounding medium to set up waves or undulations. On the supposition that it could do so, it would have to lose some of its energy, and in course of time its motion would be destroyed, just as a smoke ring loses its motion by friction with the air, and as every atom of matter is probably losing its internal motion by gradual dissipation of electro-magnetic energy.

We are, therefore, in the dilemma that either the primordial atom cannot give up any of its motion—in which case it is useless as a producer of phenomena—or else in giving up some of its motion for that purpose it inevitably determines its own disintegration, unless supplied with energy from an external source.

It is, of course, possible to assume that the energy which is apparently dissipated in space is utilised on the highest Plane of all for the re-energising of these primordial atoms. The difficulty is precisely in conceiving of any medium as being capable of forming the basis of these phenomena, and at the same time as being ' perfect ' and ' frictionless.'

We leave out of account the alternative hypothesis of an extra-cosmic Power operating " in the beginning " to wind up the Universe, and which might presumably step in at any time to give it another wind—because we are now dealing entirely with scientific concepts, and it is the fundamental axiom of science that the Universe is self-contained, eternal, and indestructible in its two factors of Substance and Motion. It is also the ambition of science to know the relations and correlations of these two factors from top to bottom of the Universe.

Now it is our endeavour here to utilise these fundamental scientific concepts in their logical extension to the phenomena of life and consciousness, and it is not necessary for that purpose that we should examine the validity or otherwise of current scientific theories as to *how* phenomena are brought about. What we must do is to accept those theories—admittedly crude and inadequate—as the best which are available in order to give us a clear intellectual perception of certain fundamental principles which—as the best statement we can get of the nature of the Universe, and of the relation of our own individual life thereto—we must either formulate thus to ourselves, or accept 'truth' at the hands of some authoritative system of revelation or inspiration.

If the Universe be such a unity as we conceive it to be, the principles which are applicable to its parts will be applicable to the whole. Every 'atom' is a mirror of the whole.

Neither is it necessary that we should know *what* Primordial Substance is, in order that we should fully perceive that some such ultimate Substance must exist; any more than it is necessary, for example, that we should know *what* the Ether is, or what part it plays in every material phenomenon, in order to understand clearly that there must be an Ether, and that it must have *motion* of some kind or other. We might conceivably be unable to form any notion whatsoever of its nature and properties, and yet clearly apprehend that such a medium must and does exist.

The vortex-ring theory of matter may possibly be as far away from the truth as the old corpuscular theory of light; but at least it conveys to us *some* ideas, which not merely help to explain individual phenomena, but which enable us to lay hold of certain fundamental principles which we hope to be able to show are applicable to life and consciousness, as well as to phenomena of matter and force.

However little, also, we may be able to understand what the real nature of the Absolute Noumenon may be, we have at least a clear apprehension of the necessary existence of some such ultimate Principle: one aspect of which will be objective—matter and force, or substance and motion—and the other aspect *subjective*—Conscious Being.

In studying the objective or phenomenal aspect of this Absolute Principle, the highest concept we can at present

form—working on the lines of purely inductive science—is that of a perfect continuous medium filling all Space. That being so, it follows as a matter of course that all phenomena are simply certain forms of motion in and of that medium. It is for science to discover what these particular motions are in any particular case; whatever they may be does not affect the general principle.

At present the simplest idea which science can present to us of an *object* in that universal medium, is that of a simple vortex-ring; and we may, therefore, work upon that idea as the best one available to illustrate the principles which we wish to enforce, and which may be found to be true, even though the vortex-ring theory should go the way of so many other scientific theories.

We may now proceed to consider the bearing of the concept of Primordial Substance upon the question of Life and Consciousness.

CHAPTER VII

CONSCIOUSNESS

"No less inscrutable is this complex consciousness which has slowly evolved out of infantine vacuity—consciousness which, in other shapes, is manifested by animate beings at large—consciousness which, during the development of every creature, makes its appearance out of what seems unconscious matter; suggesting the thought that consciousness in some rudimentary form is omnipresent."—HERBERT SPENCER, *Autobiography.*

CHAPTER VII

CONSCIOUSNESS

In *Modern Views of Electicity*, by Sir Oliver Lodge (p. 14), we are asked to, " Imagine that we live immersed in an infinite ocean of incompressible and inexpansible all-permeating perfect liquid, as fish live in the sea " ; and then the question is asked, " How can we become cognizant of its existence ? "

This " infinite ocean " is, of course, the Ether of science ; or we may here take it to be Primordial Substance : since science knows of no Substance beyond, or on a higher Plane than the Ether.

Sir Oliver than proceeds to tell us that we cannot become cognisant of it by its weight, " for we can remove it from no portion of space in order to try whether it has weight."

We are told, however, that there are four ways in which we may conceivably recognise its existence. They are as follows :—

1. " By being able to pump it out of one elastic bag into another: not out of one bucket into another,—if you lived at the bottom of the sea you would never think about filling or emptying buckets, the idea would be absurd ;—but you could fill or empty elastic bags, and could notice the strain phenomena exhibited by the bags, and their tendency to burst when over full."

2. " By winds or currents ; by watching the effect of moving masses of the fluid as it flows along pipes or through spongy bodies, and by the effects of its inertia and momentum."

3. " By making vortices and whirls in the fluid, and by observing the mutual actions of these vortices—their attractions and repulsions."

4. " By setting up undulations in the medium ; *i.e.*, by the phenomena which in ordinary media excite in us, through our ears, the sensation called ' *sound.*' "

Sir Oliver Lodge then proceeds to develop these methods in their application to electrical phenomena as depending upon the properties of the Ether. With these phenomena we are not now concerned, we must carry the matter very

much further, and ask ourselves not merely how we might conceivably become cognisant of such an hypothetical medium in its action and interaction with physical matter—and granting the existence of our present material bodies and senses—but how we can be conscious of any objective phenomena whatsoever in such a medium, seeing that our material bodies, and all other material things which we are supposed to employ in detecting its presence and properties —our "pumps" and "elastic bags," our "pipes" and "spongy bodies"—are all made out of the substance of this same medium; and seeing also that this medium being "incompressible and inexpansible," all such *objective* phenomena are due simply to *motion* in and of this same "perfect liquid," and not to any condensation, solidification, or densification of it.

Without, therefore, in any way detracting from the value of Sir Oliver's analogies in the particular use which he makes of them as applicable to the phenomena of electricity, we may proceed to point out where they help us and where they fail us in their application to the root problem of consciousness itself; for by doing so we shall be able to clear the ground for an understanding of the direct issue which lies before us.

Each of these methods, then, presupposes the existence of our physical bodies, and of 'matter' out of which we can construct our instruments of observation—our pumps, elastic bags, etc.—and which is "somewhat different" from the surrounding medium, the nature of which we are endeavouring to understand.

Let us now take methods Nos. 1 and 2, but drop the assumption that such 'matter' already exists; retaining merely the assumption that we have some kind of bodies and senses which enable us in fact to exist "as fish live in the sea"; and that we have nothing but this "sea," or "perfect liquid," surrounding us. It would be very doubtful indeed whether in such case we could have any cognisance of the medium itself; whether we should be really *conscious* of it. It is an open question whether fish are in any sense conscious of the medium in which they live—or possibly we may say that they are so conscious of it as to be unconscious of it. Possibly we are so conscious of the Ether that we fail to recognise the fact. Now, so far as our pumps, elastic bags, etc., are concerned: how on earth—or in the sea—are we going

to construct them out of the "sea water" itself? To talk about doing so would appear to be as absurd as to talk about filling and emptying buckets at the bottom of the sea.

In method No. 3 we are told that we may make "vortices and whirls in the fluid, and observe the mutual action of these vortices, their attractions and repulsions." We may overlook the little difficulty that there is no conceivable way in which we could make such vortices or whirls in a "perfect liquid," that is to say, one in which there is no friction; and we must also pass over the difficulty to which we have referred on page 123, that such vortices could not be perceptible objects at all, in the ordinary sense, inasmuch as we could not distinguish them in any way from the surrounding medium in and of which they are formed, though we might conceivably be aware of them by a sense of touch.

Let us grant, however, that we are able to set up such vortices or whirls, and also that we are able, as stated in method No. 4, to set up undulations in the medium. If we make these suppositions—without as yet considering the question of the relation of our physical bodies to the medium, and supposing that we possess our present physical senses—we can then see that we might be able to create some sort of an objective universe by motion only.

For if we may conceivably set up those kinds of undulations "which in ordinary media excite in us through our ears the *sensation* called sound": we may also conceivably set up those particular kinds of undulations which excite in us through our eyes the *sensation* of light; and we may further—method No. 3—set up vortices or whirls which will give us the *sensation* of matter (mass or inertia) through a sense of touch; and conceivably also a sensation of taste or smell.

This brings us right down to the root of the whole matter. For let us suppose that our vortices or whirls *are* the particular form of motion in our perfect medium which we call 'matter': then it is conceivable that in conjunction with the undulations which give us the *sensation* of light, these undulations might be so modified as to give us the *sensation* of a material world: namely, the perception of external objects differing from each other in various respects, such as density, colour, etc.

Now that is precisely the explanation of the real facts of the case, of the real nature of the external objective world, so far as science can at present give it, on the basis of the existence of One Primordial Substance. Certain modes of motion of Primordial Substance which we call *matter*, modify certain other modes of motion which we call *light*, and as the result we *see* a world of matter and form.

These vortices or whirls also offer to our sense of touch a sensation of resistance; *i.e.*, they give us the impression of *force*, and we thus ascribe to them the qualities or properties of mass or inertia.

We can now see clearly that in so far as all these different kinds of motion—vortices, whirls, vibrations, undulations, etc.—are equally motion in and of Primordial Substance: none of them have in reality a *substantial* existence any more than the others. Matter is not really more substantial than light; nor is the Ether less substantial than physical matter. All are of one Substance, which is incompressible, inexpansible, and unchangeable.

So far as this goes there is no reason why 'undulations' should not be objective matter, and 'vortices or whirls' phenomena of light or sound, instead of *vice versa*. In fact we see that 'matter' is simply that form of motion of Primordial Substance to which consciousness assigns an objective value, together with certain secondary values which we call *qualities*, such as mass, inertia, hardness, softness, etc.

To other beings, to other forms or modes of consciousness, 'matter' might be, and indeed probably is, quite other than what it is to us; whilst that which to us is invisible and subjective is to them plainly objective.

The *sensation* of matter is as purely subjective as the *sensation* of light or sound. In the case of light we have different wave-lengths or rates of vibration, of which consciousness takes note through our physical organ of sight. But why should one wave-length be *red* and another *blue*? The external phenomenon, the correlative of the sensation, is in each case the same in *quality*, and differs only in *quantity*. As motion of a medium it is neither red nor blue. What possible *physical* explanation is there why one should be red and the other blue, simply because they differ in wave-length and rate of vibration? It is consciousness, and consciousness alone which determines this. We may trace back

all the correlations of matter and force from the source of light to the last atom of the cells of our brain : we shall not then be one shade nearer an explanation as to *why* these vibrations, and atomic or molecular movements, should produce the *sensation* of light and colour ; or why different rates of vibration should, in consciousness, be different colours—or any colour at all.

But what we need to realise clearly is, that this is not merely true of light and sound, it is true of *matter* also. In each and every case we are dealing with something which—as mere motion of Primordial Substance—is *quantitatively* and not *qualitatively* different. All the varied kinds of matter of which we are cognisant—and an infinite variety of others of which we are not cognisant—are only varied motions of Primordial Substance which consciousness interprets in its own terms.

There may be—there is nothing scientifically absurd or illogical in the supposition—other Intelligences, other modes of Consciousness than ours, other Beings in the universe to whom certain modes of motion of Primordial Substance which are utterly unknown to us constitute a world of *matter*, an objective universe, as clear and definite to such Beings as ours is to us.

There may be, there probably are, Beings in the Universe —Gods if you will, Cosmic Intelligences—to whom the great Cosmic Processes, the birth of Worlds and Systems, the activities and motions of Suns and Planets, the great cosmic forces which call forth our objective universe from the vast depths of Primordial Substance : are analogous to—what to us are—the activities of those ' material ' bodies in and through which our limited personal consciousness now functions.

Up to this point we have assumed—in trying to understand how we might conceivably take cognisance of this ocean of Primordial Substance in which we live, and out of which all things are made—that we are already in possession of some kind of ' body ' somewhat different from this medium, and of our present physical senses ; but we must now drop this assumption, and endeavour to understand how such *bodies* can be conscious at all, seeing that they also, or any bodies whatsoever which we or any other Intelligences may possess, on this or any other Plane of the Cosmos, are themselves made out of this same Universal Substance or Medium, and

are nothing more or less than highly complicated aggregations of these same vortices, whirls, undulations, and vibrations.

The physical material ear, the nerve fibres which carry the vibrations of sound from the ear to the brain cells, these ultimate brain cells themselves, the last link which we are able to trace in the physical chain of cause and effect: are all made out of this same perfect incompressible and inexpansible Medium; whose modes of motion are as infinite in variety as the inexhaustible phenomena of the Cosmos Itself.

Is it, then, merely these vortices and whirls—when they come together in that particular complex which is the physical organ of hearing and the brain cells connected therewith—which are *conscious* of sound; or is it Primordial Substance Itself in all or any of its complex motions which is conscious? Is that consciousness which *hears*, which indeed we call "we," annihilated as soon as this particular complex is broken up or damaged; or is it only that "we" cease to hear "through our ears"? Why should one complex of motion of Primordial Substance be conscious, and not another? Is consciousness, in fact, a time phenomenon merely; arising by a process of evolution, and entering in as a totally new factor at a certain point in the cosmic process; or does it, like Primordial Substance and Motion, exist eternally?

Now we cannot conceive of abstract consciousness apart from something which *is* conscious, any more than we can conceive of abstract motion apart from something which moves; and it appears to be precisely this difficulty which meets us when we try to conceive of any survival of consciousness after the disintegration of the physical organism, in which we see plainly that consciousness does inhere at the present time. The reason for this is that we have no adequate conception of any *body* existing on another Plane. In fact, science finds it hard enough to form a mental image of what may be the particular forms of motion on the Etheric Plane associated with such phenomena as light, electricity, etc., without going into any question as to the possible forms of life and consciousness on that Plane. Nevertheless, we see clearly that the Substance of that Plane—or of any possible higher Plane—being all *one* with the Substance of our present Plane of consciousness: it is just as possible for *bodies*, and a whole objective universe, to exist for an infinite variety of conscious entities or monads on other Planes, even as we find

on this particular Plane: which is only limited to us, as a Plane, because of the limited range of our physical senses through which our consciousness for the time being is functioning.

We shall have to consider the question of individual forms of consciousness, however, more fully in a subsequent chapter; at present we must confine our attention to consciousness itself in its relation to Primordial Substance.

We start with the empirical fact that states of consciousness do exist or inhere in certain more or less complex combinations of those whirls or vortices which we call matter; and we must endeavour to keep our minds steadily on the fundamental scientific concept at which we have already arrived, that all forms of matter, however aggregated, complex, or organised they may be, are nothing more or less than forms of motion in and of Primordial Substance. There is no distinction in this respect between inorganic and organic matter; between so-called 'dead' or so-called 'living' matter.

Living matter is simply, *quâ* matter, a sufficiently complex aggregate of 'dead' matter to enable certain phenomena which we empirically associate with life and consciousness to manifest in or through that organism. The more complex it becomes, the more it is organised, the better it is able to manifest these phenomena. In this respect it is no different from a complex machine, which is able to perform a variety of functions which are impossible in a simpler one. Whatever may be the transcendental nature of the Monad or Ego, its activity on the Physical Plane must obviously depend upon the nature and complexity of the organism which is its representative, vehicle, or instrument on that Plane.

There is no doubt as to the teachings of modern science on this point. Considered *as a mechanism*, the most highly organised physical body—our own, to wit—is on the same level not merely as the lowest, as the amœba or the speck of protoplasm, but as the chemical molecule and the atom itself. All physiological functioning is in the first instance—for science—a question of physics and chemistry. The idea of a vital force has gone the way of phlogiston and all other individual imponderable forces. The processes which go on in a 'living' body are just as much physical and chemical as those which go on in so-called 'dead' matter. Just as there is no line of demarcation between the animal and the vegetable kingdom —it being impossible to say of some of the lowest organisms

whether they should be classified with the one or with the other—so there is no line of demarcation between living matter and dead matter. Both, *quâ* substance, are equally 'dead,' or equally 'alive.' The question here is not one of *kind*, but simply one of *degree*.

On page 31 we have referred to the large number of organic substances which are now made by purely chemical processes, and chemists now look forward confidently to the time when protoplasm, the lowest form of 'living' matter, will also be built up by a synthetic laboratory process.

There are, however, still many who deny the possibility of this, and adhere to the old axiom, *omne vivum ex vivo*. It is not safe, however, to dogmatise as to what may or may not be accomplished in the future; and if we can find some ground for a higher concept of life than that it only arises as a by-product, so to speak, of a more or less complex chemism, we may look forward with complacency to the time—if ever it does arrive—when living organisms of the lowest type may possibly be 'created' or synthesised in the laboratory.

We may point out, however, that it is a very far cry from protozoa to man; it is a journey involving the whole process of evolution on this Globe—and a great deal more besides, which science has not yet taken into account.

In thus carrying the line of evolution one step further back, in passing from the lowest form of 'living' matter to that which is *apparently* dead, we are only making a logical, consistent, and philosophical deduction from the universal principles at which we have already arrived. The fundamental principle of the unity of the universe forbids us to conceive of any discrete or essentially disconnected planes or phases of phenomena. The principle of evolution forbids us also to conceive of any gaps in the natural process. Nature does nothing by leaps and bounds; transition is always slow, imperceptible, continuous.

These principles have obtained complete recognition as the very antithesis of the old 'creational' ideas, of what has sometimes been described as the "theology of gaps." We may point out, however, that not so very long ago there was a science of gaps as well as a theology of gaps; that science of gaps being represented by the idea that physical matter and Ether are two absolutely discrete things, that physical matter always is and always has been physical matter, and

nothing else; and that Ether never was and never will be anything but Ether. Even with those scientists who have accepted the evolution of physical matter from the Ether, we fancy there is still a quite sufficient number of "gaps" in their association of the Ether with the still higher Planes of Mind and Consciousness, or with that highest Plane where the essential unity of ALL—Substance, Motion, Life, Consciousness—must be the one ever-present reality.

But although we must logically carry our line of evolution right through the whole world process, without a break from the highest to the lowest, it does not follow that we can, with our limited powers of observation, trace that line in all its extent, much less imitate the process in some or any of its innumerable stages. The transmutation of metals is no longer a theoretical hypothesis, it is actually being accomplished by Radium. Yet modern science cannot as yet imitate the natural process; and is, indeed, very loth to acknowledge that it may possibly have been done by the Alchemists, in spite of all that those philosophers have written about it. The gradual evolution of organic life from inorganic matter is a natural and logical inference: yet up to the present time the old dictum, *omne vivum ex vivo*, still holds good in the narrow sense in which it has hitherto been used.

Many effects have been observed from time to time in inorganic matter which simulate the motions of low forms of life, but they are not the real thing. Small pieces of camphor dropped on the surface of water move about in a remarkable manner. A little gamboge rubbed up in water and viewed through a microscope, is seen to have motions which look very much like those of animalculæ. Some instructive researches have been made by Professor Jagadîsh Chandra Bose, M.A., D.Sc., of Calcutta, and published in book form under the title of *Response in the Living and Non-Living*. What is known as the phenomenon of *fatigue* in metals has long been observed, but among other things Professor Bose finds that metals exhibit a susceptibility to *poisons*, in a manner analogous to the behaviour of living organisms; and the effect of the poison—non-response—may even be counteracted by the due administration of an antidote. Mr. J. Butler Burke, of the Cavendish laboratory, Cambridge, has published an account of some experiments with Radium and sterilised bouillon, which appear to border very

nearly on the production of apparently living matter. More recently still, Dr. Leduc of Nantes has obtained certain growths which have the appearance of definite cells able, to a certain extent, to reproduce themselves. There is no reason to think, however, that in any of these phenomena the problem has really been solved, or that anything approaching to what we recognise as ' life ' in the lowest organisms with which we are acquainted has really been produced.

Let us suppose at once, however, that protoplasm may at some future time be produced in the laboratory by a purely chemical process : if we have already accepted the principle of continuity, our position will be unaffected when that result has been actually accomplished. Neither will the dictum that all life comes from life be in the least affected. The problem of life will be just exactly what it is now, it will only be thrown one step further back for those who have confounded the *principle* of life with the organism in or through which it manifests on this particular physical Plane of consciousness. This step we have already taken. In definitely proving that there is a natural continuity of *organism,* we shall not even have touched the real problem of the nature of life itself, nor shall we in the slighest degree upset the principle that all life must arise in some prior form of life, just as all motion must arise or be traced back to some prior motion. ' Living matter ' is not *Life.* ' Living matter ' has almost certainly evolved out of ' dead matter '—these being merely comparative terms of our perceptions. But life itself—out of what has *that* evolved ? We might as well say that motion has evolved out of rest, as say that life has evolved out of anything which is ' dead.' Motion of a particular body, an atom for example, has doubtless evolved : but it is nevertheless a fundamental scientific axiom that it must be traced back to some prior motion. Motion makes its appearance—on the Physical Plane—from prior forms of motion on other Planes. *Life and motion can be treated on exactly the same terms.*

Having arrived at the conclusion that all matter, whether ' dead ' or ' alive,' is simply motion of Primordial Substance : what kind of motion it may be does not affect the principle of continuity. The conservation of motion is a scientific axiom, although it has not been, and cannot be, proved. We have seen in our chapter on the Inter-relation of Planes that radiant energy is the transfer of energy from the Physical

to the Etheric Plane, and that there it is apparently lost in space without any chance of recovery.

The conservation of life rests upon exactly the same principle as the conservation of energy; and possibly if science knew how to look for life on the Etheric Plane, the continuity would be somewhat more apparent than it is at present.

But in each case—motion and life—we must go right back to Primordial Substance before we can formulate a universal principle. We have done so in the case of motion, let us now do so in the case of life and consciousness.

In order to get a clear mental picture, we have decided that we will conceive of the primordial atom—the first form of motion in and of Primordial Substance—as a simple vortex-ring or whirl, and of all the "lower'—*i.e.*, more involved—Planes of 'matter,' right down to the lowest or Physical Plane, as being more or less complex aggregations or systems of these primordial atoms. The particular form which these systems assume in any particular case does not in the least affect the main principle. It is for science to discover what are the particular forms of motion connected with any particular phenomenon.

Now the question may be put: can any complex of these primordial atoms exhibit any characteristics which are different in *kind* from anything possessed by the primordial atom itself, and, as such, inherent in Primordial Substance; or must it not be that the difference is one of degree, and not of kind?

It may be, indeed, that the difference of degree is so great as to appear to be a difference of kind. It may be also that a difference of complexity enables certain qualities inherent in Substance itself to become manifest, which were not possible in a less complex form; nevertheless, the position of all scientists, and all biologists and chemists, who tell us that all 'living' matter has evolved out of 'dead' matter, or that protoplasm is only an exceedingly complex molecule, and that life is a series of fermentations, is precisely this: that it is a question of *degree* and not of *kind*.

We shall take these scientists at their word; we shall accept the fundamental principle that whatever is manifested in any complex of atoms or 'matter,' on any Plane whatsoever, is only a question of degree and not of kind; though the

degree may be so great as to appear to us to be altogether of a different kind. *All 'matter' being Primordial Substance, nothing can be manifested in it which does not belong to that Root Principle in an absolute degree.*

Accepting, then, this fundamental principle, and applying it to consciousness, we find that the primary difficulty—like that of motion—is not one of degree, but of kind. Scientists have no difficulty in accepting the fundamental principle that motion is inherent in Primordial Substance, and that it is indestructible and eternal; while at the same time they recognise that any particular phenomenon is simply a matter of quantity or degree of motion. And in regard to consciousness, it is not a question as to whether more or less complicated organisms—in which term we must now include physical molecules and atoms—can exhibit more or less consciousness, any more than they can exhibit more or less motion. We have the fact before us that they do so. The real question is: how can any organism whatsoever, from the simplest to the most complex, from the primordial atom to man himself, exhibit *any* motion or *any* consciousness at all, unless both of these are inherent in and inseparable from that Root Principle which is the Universe, and which we at present term Primordial Substance?

In order to simplify the question, let us reduce our idea of consciousness to the simplest possible terms, and deal with it merely as awareness. Let us then fix our attention on a simple primordial atom, on a simple vortex-ring, and ask ourselves: how can such an atom be *aware* of the presence or contact of other atoms, of something external to itself? It comes into collision with another atom, let us say, and its motion is thereby modified; how is that modification of motion translated into *consciousness*? Can we conceive in any way how that modification of motion can be in that atom a *sensation*? But if we cannot conceive of this—of at least a rudimentary form or degree of consciousness as inherent in that atom—how can we possibly conceive that a mere aggregation of such atoms or vortex-rings can give rise to *more* awareness, to *more* sensation? Even Haeckel, as already remarked, has perceived the incongruity of attributing to a complex of atoms anything which is different in kind from that which the atoms themselves possess, and he therefore endows his atoms with "a rudimentary form of sensation

or will." This does not, however, help us in the least with the ultimate and final question. When we push it right back to our primordial atom, we have still to ask, how can *that* be conscious, even in the most rudimentary degree? If the primordial whirl is merely motion of *dead* Substance, no possible complex or aggregation of it can ever make a living body, much less a living soul—unless indeed we postulate that life is something wholly independent of Substance: which is at present outside of our hypothesis. Motion of unconscious Substance can never give rise to consciousness. No number of dead dogs will ever make a living one. No number of "fermentations" will ever make a living *soul*, though they may make a very active carcass.

But consciousness must inhere in something; we can no more conceive of consciousness apart from something which *is* conscious than we can conceive of motion apart from something which moves. In this respect consciousness and motion are on exactly the same terms. Let us treat the question so, and see how it works out.

To take motion first—let us ask what alternatives we have as to the origin of motion, or its relation to Primordial Substance.

We may advance three propositions.

(*a*) Motion is inherent or innate in Primordial Substance. It is the *nature* of Primordial Substance to have motion, and such motion is eternal and indestructible.

(*b*) Primordial Substance is capable of initiating its own motions.

(*c*) There is some power outside or beyond Primordial Substance which can act upon it and cause motion.

Hypothesis (*c*) we shall at once reject. It is only throwing the question one step further back, and is dualistic, not monistic.

Hypothesis (*b*) can neither be affirmed nor rejected. Possibly there may be a sense in which Primordial Substance does initiate its own motions. This would be so in any case in which we might legitimately use the phrase "in the beginning." In so far as absolute motion is, in its phenomenal aspect, only relative motion—but in its absolute aspect is no motion at all—we might say that when phenomena arise, that which appears to us under the form of limited or phenomenal motion is originated by Primordial Substance.

On the other hand, we must reject such a statement from the point of view of the absolute conservation of motion.

There remains hypothesis (*a*), which is certainly the one most in line with science and philosophy. In accordance with this we should define Primordial Substance as an active moving Principle, whose *nature* it is to have *motion*.

This would explain to us fully and completely why all matter is associated with a definite quantity of motion or energy. All matter *is* Primordial Substance, and it is the essence of that Substance to have motion. Without such motion there could be no phenomena, no objective world. All individual phenomena are — *quâ* phenomena — simply degrees or modes of motion. That which *sub-stands* motion, that which is the efficient *cause* of the whole phenomenal Universe of motion, must Itself possess the principle or attribute of motion in an absolute degree.

Let us now treat consciousness on the same lines. We shall again have three possible propositions.

(*a*) Consciousness is inherent or innate in Primordial Substance. It is the *nature* of Primordial Substance to be conscious, and such consciousness is eternal and indestructible.

(*b*) Primordial Substance may initiate consciousness *pari passu* with an initiation of its own motions.

(*c*) There is a Power outside and beyond Primordial Substance which can endow or create consciousness in the forms of motion which it also *causes*.

Hypothesis (*c*) we shall reject for consciousness on exactly the same grounds as we have rejected it for motion. If we postulate such a Power in either case, we have the question of the relation of Primordial Substance itself to that Power—its creation or otherwise—still unsolved. We have a duality of ultimate Principles instead of a Unity.

Hypothesis (*b*) can be treated in exactly the same way as its corresponding one for motion. Absolute Consciousness is unconsciousness, but when the Absolute appears under the guise of the relative, consciousness in varied forms may appear to be initiated.

Hypothesis (*a*) we must accept as the only one which will harmonise with the scientific and philosophical principles already advanced. Primordial Substance is an active Conscious Principle ; it is the *nature* of Primordial Substance to be conscious. Strictly speaking, the nature of the One Absol-

ute Noumenon is neither consciousness nor unconsciousness, neither subject nor object; but since consciousness as Subject, and Primordial Substance as Object, rise together, and are complementary or reciprocal—Primordial Substance being that in or through which consciousness is manifested—we may consider it as being itself a Conscious Principle. Consciousness and Primordial Substance in their ultimate analysis are indistinguishable from Absoluteness Itself, for the absolute motion of Primordial Substance as such, is also absolute consciousness.

Primordial Substance we must, therefore, now treat not merely as the substrate of motion, but also as the substrate of consciousness. Combining our definition of it in terms of motion with our definition in terms of consciousness, we find that: Primordial Substance is an Active Living Moving Conscious Principle. It is the Root of all that has appeared, or does appear, or can appear as Phenomena.

It is perhaps natural to think of the term *Substance* rather from a material than from a metaphysical point of view; and, indeed, we have been gradually working our way up to it from an analysis of physical matter and phenomena. But Primordial Substance Itself clearly cannot be matter, for matter is only a form of motion therein. We must not lose sight of the fact that the term *Substance* means simply that which sub-stands or stands under. It is the root or substrate of phenomena rather than phenomena itself.

Seeing that Consciousness and Phenomenon, or Subject and Object, arise together as motion of Primordial Substance, and are mutually interdependent or correlative: Primordial Substance may be considered to be that which sub-stands Consciousness as well as Matter. In this sense it is not distinguishable from the Absolute Noumenon Itself; indeed it has been used as a term for the Absolute by some philosophers. There is no objection to this if the purely philosophical or metaphysical meaning of the term is kept in view, but there is always a danger of this being lost sight of in the more material meaning of the term. Such, indeed, is the case in Haeckel's use of it, to which we shall presently have to refer.

We have seen that the disintegration of the physical atom liberates an enormous amount of energy or motion, and we have further seen, in our last chapter, that if we think of this process as continued right back to Primordial Substance, we

may conceive of a number of ultimate simple vortex-rings as constituting the 'matter' or atoms of the highest Plane, each atom having almost absolute motion. As having almost absolute motion, they will also have almost absolute consciousness. If we conceive finally of these atoms themselves breaking up, we shall then have nothing left but absolute motion and absolute consciousness.

There is no difficulty whatever, and apart from all metaphysical speculation, in thus conceiving of Consciousness and Phenomena as arising simultaneously in *Motion* of Primordial Substance; and it gives us the clue to the fact that not merely does all matter, all objective phenomena, involve motion, but that it also involves some form of life and consciousness—a conclusion at which science now appears to be in a fair way of arriving.

Every form of motion, then, of Primordial Substance may be regarded on the one hand as an object, as a 'thing,' on whatever Plane it may exist; and on the other hand it is a definite form of consciousness: it corresponds in consciousness to a definite *idea*. A thought is certainly a 'thing' on its own Plane, as a definite motion of Primordial Substance; and on the highest or Spiritual Plane, in the Archetypal World, 'things' may well be pure Ideas, even as old Plato taught.

Primordial Substance, considered as the substrate of Motion, is an infinite ocean of Motion; considered as the substrate of Consciousness, it is an infinite ocean of Consciousness. We cannot impute consciousness to one part of it, or to one form of motion, and not to another. Forms of motion being necessarily *limited*, may and do disclose limited forms of consciousness; but all consciousness, in whatever form, owes its existence, like motion, to the inherent inalienable nature of Primordial Substance Itself.

In all cases, therefore, where we can recognise consciousness as inhering in any particular form of 'matter'—as well as in all cases where as yet we do not recognise it—there will be a complete parallelism between the objective form and the subjective consciousness; and though we are a very long way from knowing what the particular forms of motion involved in an atom or a brain cell really are, it is commonly acknowledged that wherever consciousness is recognised as located in such cells, such a parallelism does exist; indeed

the whole argument for Materialism is supposed to be founded upon this fact.

Consciousness, in its relation to Matter or Substance, must in fact be either *ab extra*, or *ab intra*. If the former, then we have only arrived at a dualistic conception of the Universe. If the latter, then we must adopt in the fullest and completest manner the great Truth which Herbert Spencer appears to have intuitively sensed in his later years—though never completely grasped in an intellectual manner—that Consciousness, like Motion, is Omnipresent. It cannot, however, be omnipresent "in some rudimentary form." The Causeless Cause of Motion is not a *form* of Motion—rudimentary or otherwise. So also the Causeless Cause of Consciousness is not a *form* of Consciousness, but Consciousness itself.

But the view we are now advancing breaks down completely the barrier between Materialism and Idealism; and this position we must now proceed to consider somewhat more in detail.

CHAPTER VIII

MATERIALISM *V.* IDEALISM

"It is worth any amount of trouble to . . . know by one's own knowledge the great truth . . . that the honest and rigorous following up of the arguments which lead us to 'materialism' inevitably carries us beyond it."—T. H. HUXLEY.

CHAPTER VIII

MATERIALISM *v.* IDEALISM

"EXTREMES meet." If we can really see in what way they meet we shall be enabled to hold ourselves in that balanced position which is essential to all real sanity, which consists fundamentally in viewing things in their proper relation and proportion, and which is denied to the man who can only see one extreme.

Every statement of truth is necessarily made from a particular point of view. In a universe where everything depends for its very existence upon some particular relation to something else, where a 'thing' is only known by its relations to other 'things,' there is necessarily a limitation, many limitations, implied in any statement whatsoever as to the *nature* of that 'thing.' In any statement of truth, therefore, it is necessary to understand the limitations implied in the particular point of view from which any particular statement is made.

We may be perfectly justified, indeed, in the common use of language, in saying that a thing *is* so and so, when we really know that we are only talking of its appearance. We say that the sky is blue, whereas in fact there is no such 'thing' as a sky at all; and if there were, the blueness would not be in the sky, but in our consciousness. Physical science is able to make definite statements which are perfectly true as statements of the way in which certain phenomena are apprehended by us in our normal states of consciousness. In doing this, science must and can ignore the larger question as to the validity of those phenomena as phenomena *external* to consciousness. It takes no account of any "Critique of Pure Reason," of any question as to the real nature of those *presentations* in consciousness which constitute for us the sole criterion of the existence of an external world, apparently independent of consciousness itself.

Science is, in fact, within its own province, essentially *Realistic*; and when this is clearly understood it is seen that no amount of Idealism can destroy the legitimate Realism of science; nor can any amount of Realism destroy the legitimate Idealism of a deeper and wider inquiry into the fundamental nature of the relation between Subject and Object.

Idealism in practical life must descend to Realism: otherwise it breeds a strange disease of imagination and language. Realism attempting to become metaphysical, to explain consciousness in terms of matter and force, "o'erleaps itself and falls on the other (side)."

Such an attempt is usually termed Materialism; and it is necessary, before we proceed to the more constructive part of the scientific, concrete, or empirical Idealism which we are here endeavouring to elucidate, that we should clear the ground by considering the alternative position of scientific Realism or Materialism.

The part which Life and Consciousness—individual and collective—plays in the great Cosmic Drama may be considered mainly in three ways, each of which is in strong contrast with the others.

The first of these is Realism or Materialism; the second is Supernaturalism; and the third is Idealism.

These three correspond broadly to three distinct stages in the life of the individual and of the Race. In the first or earliest stage the mere appearance of things is accepted as a reality. Things are to the individual simply what they appear to be. It is the stage of the childhood of the Race and the individual. The fact that a few of the ablest scientists have been professed Materialists does not alter the general principle, that the acceptance of the external world at its own valuation, so to speak, comes first in the order of the evolutionary history both of the Race and of the individual.

The fundamental proposition of Materialism is, that the *presentation* which we have in consciousness of an external world is true; things are mainly what they seem. Matter and force as we know them—as apparently constituting a definite universe altogether independent of any cognising consciousness—are the only *Reality*; and all phenomena, including consciousness itself, are explicable by them.

Life and Consciousness in this view have no relation to the Cosmic Process as a whole. That process is a purely

mechanical one, and Life and Consciousness are *caused*, or produced, by mere mechanical motions of matter or Substance. They result only from certain more or less complex combinations of atoms and molecules. Matter in its ultimate analysis is what it appears to us to be, *i.e.*, something possessing mass or inertia, and extension in space. Life and Consciousness are only incidents in the aggregation of matter which we call our Earth, and possibly of other Globes in space—provided the conditions of temperature, etc., are suitable, *i.e.*, approximate to our own. When our Globe finally falls into the Sun, or freezes out by reason of the cessation of the Sun's heat: that is simply an end of the vast process which has evolved *Man* out of primitive protoplasm, primordial slime, or cosmic star-dust. The process has no meaning; it subserves no cosmic purpose; it had no design to commence with, and it leads nowhere. Such is the Materialist's bald, bare theory.

The second theory, the second stage in man's evolving mentality and outlook on the universe around him, and his understanding of his relation thereto: is that of Supernaturalism.

It arises in the dawning conviction of the individual that things are not altogether what they seem, and that they are inadequate in their mere appearance to explain their own existence. A *Power* is therefore sought for who could make the universe; and that Power is naturally, in the first instance, merely a magnified human being. The growing self-consciousness of the individual, the intuitive feeling of something higher and nobler in his own nature than what is expressed in the mere physical man, gives rise to all the varied forms of religion, expressive of a moral obligation towards this supernatural Power or Deity. To Supernaturalism, therefore, belongs all dualistic and theistic doctrines and systems. It is essentially a theory which postulates a *spiritual* order of things, outside and independent of the material world; operating in the material world certainly, but still doing so as something essentially other than the material world; doing so, in fact, by the will of a Divine Being; the Cosmic Process having no necessary relation, as a Process, to the *Nature* of that Being.

Thirdly, we have that view of Life and Consciousness, and the relation of the Cosmic Process thereto, which may be broadly termed Idealism, but which is hardly sufficiently

expressed by that word in its scholastic sense; though it must be held to include all those forms of idealistic philosophy which postulate that Consciousness is the Reality, and that Matter has only, as it were, a pseudo-reality as a product or process of Consciousness.

But the Idealism which we would here elucidate includes very much more than is usually understood by that term in a philosophical sense. It includes, as we shall hope to show in a subsequent chapter, the highest form and expression of a religion of experience.

It is the view which definitely indentifies Life and Consciousness with the Cosmic Process, in the sense that that Process is essentially the expression of a Unitary Principle, whose Nature or *Being* is to express Itself in such a Process. Thus the Universe exists for and because of Life and Consciousness, which are universal Principles and determining Causes.

It does not follow, however, that Consciousness and Matter are related as cause and effect in the sense in which we commonly employ these terms; for Consciousness and Matter may be two aspects of one and the same thing, simultaneously arising and simultaneously existing. But Life and Consciousness are certainly *causes* in this sense, that without them there could be no Cosmic Process at all.

Thus Idealism is the direct antithesis of Materialism, which postulates that the Cosmic Process exists altogether independently of any Principle having in Itself, as its innate or inherent nature, that which wells up in our own nature as Consciousness.

Idealism arises in the understanding and conviction that things are *not* what they seem; and also that the Power which lies behind the mere appearance of things is not *outside* of those things, but inherent or innate in them; that they are not mere arbitrary creations of that Power, but a necessary and inevitable expression of Its very Nature and Being.

And with the understanding of this comes also the understanding that our own individual life and consciousness, like all else in the Universe, must necessarily be rooted in the larger Life and Consciousness of that Eternal Power which is the Universe.

"Extremes meet." What, then, is the meeting-ground of

the two extremes of Idealism and Materialism? It is found in the fundamental concept of an Absolute Primordial Substance or Noumenon, which we have endeavoured to elucidate in the last chapter; in the concept that Consciousness, like Motion, is innate or inherent in such Substance; that, in fact, this Motion is on the one hand Consciousness or Subject, and on the other hand 'Matter' or Object; the one being the complement or correlative of the other.

No abstract metaphysical concept is involved in this idea; it is one which may be grasped and understood by every one. It is based upon our common experience and language, and supported by certain fundamental scientific principles.

Motion must inhere in *something*, and so must Consciousness. We simply cannot conceive of either Motion or Consciousness without some substantial basis or substrate; without something which moves, and something which is conscious. It is only when we begin to enquire into the ultimate nature of that Something, and endeavour to formulate the particular way in which the Cosmic Process arises therein, or is related thereto, that we come into the difficult and intricate region of formal or academic philosophy and metaphysics.

We have no intention in this volume of entering therein, or of inquiring into the how and the why of Primal Causes. We desire rather to present the highest achievement of philosophy, the noblest ideal which has ever been reached by Man as to his real intrinsic nature—the oneness, that is, of his own life and consciousness with that Divine Principle which is the Life and Consciousness of ALL—in such terms as to be understandable without any special philosophic or scientific training; to present a working hypothesis, based upon scientific principles, which shall enable those who have perhaps as yet only dimly perceived this great Truth, to advance boldly towards a practical realisation of it in their own life and consciousness.

Consciousness, in any form in which we can know or understand it, is essentially a relation of Subject and Object, of a knower and that which is known. Consciousness, in order to know itself, in order to *realise* itself, requires as it were to project itself outwards in an external form. We all desire that our ideals shall become realities; that that which is internal and subjective, which exists as part of our inner nature, as

feeling or desire, shall become realised as some external fact in our life, either here or hereafter. We are not satisfied with a vague, shadowy, subjective ideal; it must needs be placed before us in an objective form.

These ideas or ideals are surely part of our *self*, inasmuch as they are not merely part of the contents of our consciousness, but are ruling and determining forces in our whole life and conduct.

Now this external world of *form*—this object world in which thoughts and ideas become 'things'—we have found at root to consist of forms of motion in and of Primordial Substance; and in so far as we call this external world a world of *matter*, we see that the last and final definition of matter must be: that aspect of Primordial Substance which is *objective* to Consciousness, to the thinking, acting Subject.

What now of that Subject itself, of that *something* which *is* conscious? Do we need to go beyond Primordial Substance in order to find it, whether we are Materialists or whether we are Idealists?

The Materialist certainly does not go beyond it, because his fundamental proposition is precisely that it is matter itself which is conscious; that the whole phenomena of life—consciousness, thought, emotion, etc.—are, in their last analysis, motion of material atoms: chemical and physical changes in organic substances. Organisms, brain cells, etc., can think and reason about their own existence, and the existence of objects other than themselves. Their own motions constitute their own consciousness.

Now, so long as physical matter was considered to be something *sui generis*, so long as it was considered to be indestructible as physical matter, there could be no meeting-ground for Materialism and Idealism. But the question assumes a very different aspect as soon as we realise that 'matter' is resolvable into an eternal Root Principle or *Substance* which certainly is *not* physical matter, nor anything which possesses any of the qualities which we ascribe to physical matter; that it has, in fact, just as much right to be called Spirit as to be called Matter—physical matter being only a certain form in which Consciousness apprehends this universal unchangeable Substance. When this is understood, it is seen that in postulating that it is 'matter' itself—*i.e.*, Primordial Substance—which thinks and is conscious, Materialism is contending for exactly the

same thing as Idealism; it contends, that is to say, that Primordial Substance is Subject as well as Object.

What, then, is the relation between Primordial Substance considered as Subject, and the same Substance considered as Object? What can it be, but that of the Universal Subject, the Universal Self, *objectivising* Itself: *realising* the contents of Its own Nature, Its own Consciousness, in an external manner as a world of matter and form? And what is postulated thus as the action of the Universal Subject or Self is precisely what we find in every individual self—the ever-present desire to express itself in outward form, the desire to *realise* its own nature, to make an *idea* into a *thing*.

But besides this outgoing energy, this centrifugal force, there is also possibly in the Universal Self, as in the individual self, an ingoing or centripetal force. It is just possible that in the highest as in the lowest there is a *negation* in external things as well as an affirmation. All life is a question and answer. It is the great question, what am I? continually asked, continually answered in an objective external world: but just as continually negated almost a soon as it is answered; negated, that is, by a much larger and more complete affirmation.

Always the answer is: I am not this and not that; I am something more; and still more again. And so life seeks ever for more life, and consciousness for more consciousness, and one ideal fades to give place to another—until we have learnt to recognise shadow from substance, until we have finally realised that subject and object are *one*. Of this, however, we must treat more fully in our later chapters; it concerns the religious aspect of the question; but at this point it may afford us a hint as to the eternal ceaseless activity of Primordial Substance considered as both Subject and Object, considered as the Eternal Self eternally realising Its own Nature; an eternal affirmation of Itself in the great Cosmic Process: an eternal negation by the individual selves of their separate or individual nature.

Now this process, whether considered objectively or subjectively, is essentially *Motion*. It is at the present day an undisputed scientific fact that every act of consciousness, so far as it is associated with any physical organism, is accompanied by definite changes of structure of a physical

and chemical nature in that organism. In other words, there is a complete *parallelism* between changes of states of matter and changes of states of consciousness.

This fact was formerly supposed to be conclusive for the Materialistic position, but it is now seen to mean just as much for Idealism as it does for Materialism. As a matter of fact, whatever the ultimate nature of Matter might be conceived to be, Materialism stultifies itself in its own primary postulate. For if Matter—or Substance—*is* the conscious thinking Subject which we are seeking, then it certainly *is not* what Materialism conceives it to be, namely, a dead inert something only moved by mechanical forces. In postulating that Matter *is* conscious, Materialism cuts away the ground from beneath its own feet. Matter, or Substance, cannot be at one and the same time both dead and alive ; neither, if it is a Unity, can it be dead or alive in *parts*.

Wherever we recognise consciousness, then, as inhering in any physical form of matter, in any organism, we find a complete parallelism of motion and consciousness ; we find that *motion* is, in fact, objectively what we call physical and chemical changes in matter, whilst subjectively it is consciousness. There are, however, a large number of phenomena in what is commonly called ' dead ' matter, in inorganic substances, and in the operation of cosmic forces, with which we do not associate any form of consciousness. The consciousness in an atom, like the motion, is too small for us to recognise ; the consciousness associated with the great Cosmic Processes is too vast. Nevertheless each requires in its own degree and kind some measure of that which is the inherent nature of Primordial Substance Itself, of whose activity it is a part.

Consciousness also is essentially a change of state, a flux or *motion* in the conscious Subject. Even the most abstract form of consciousness of which we can conceive, a pure emotion, necessitates in our thought an activity of some kind in the Subject. The parallelism between the changes of states of ' matter '—the Object—and those changes of states in the Subject which constitutes consciousness, being admitted : we see quite clearly that any particular motion of Primordial Substance is at one and the same time Consciousness when considered subjectively—from the point of view of the Subject or Self—and ' Matter ' when considered objectively—from

the point of view of another Subject, or of the same Subject contemplating its own changes of state.

Even when I think of my own thoughts, though these are not objective to my physical senses, they are still *my* thoughts and not 'me': and are, therefore, something which stands in relation to me as object to subject.

Take now any 'living' organism, that is to say, any complex of 'matter' in which we infer consciousness. The inference of the existence of consciousness in that organism is made from the existence of certain spontaneous motions—response to stimulus, locomotion, assimilation, reproduction, etc. We have no direct knowledge of any consciousness in that organism: that is to say, we have no direct participation in the consciousness of that organism; it is, to us, a not-self. We attribute consciousness to it as an inference from what we know of our own states and corresponding actions. We can really know nothing outside of our own states of consciousness. Even the existence of that organism as something really external to ourselves cannot be proved: it is only by a convention of language that we speak of it as a not-self. Our use of this convention is dependent upon the limitation which we ordinarily ascribe to the individual self.

Such an external object or organism must, in fact, effect certain changes in our state of consciousness by way of various correlations of energy—light, sound, etc.—and, finally, certain physical and chemical changes in the grey matter of our brain, before we can be *aware* of it at all. What we are really aware of, however, is the change in our own subjective self, and we refer this change by inference only, and by *limitation*, to another subject—a not-self.

In making our observations upon another organism—say another brain—we regard that brain as *object* only; and, as such, the motions which we are able to trace therein are for us merely physical and chemical changes of the grey matter of which it is constituted; whereas, for the Subject within or behind that brain, these same motions constitute its changes in states of consciousness. We must be careful to note, however, that these physical changes are not the whole of the motions involved in those changes. No motion or change whatsoever in physical matter can take place without corresponding motions and changes on the Etheric Plane; nor can these take place without corresponding changes and

motions on a still higher Plane; and so on, right up to the highest or Spiritual Plane. What this involves, we shall endeavour to elucidate more clearly in a subsequent chapter.

If that other brain be supposed to turn its attention to us, then that which to us is consciousness, or involves in our Subject a change in its state of consciousness, will be for the other or alien consciousness merely motion of matter: from which it will probably infer a conscious subject existing in or behind that objective state of matter which we call our brain.

So far the position is perfectly clear, and we are in agreement with every fact which Materialism, or physical science, or physiological psychology can bring forward. Indeed we are prepared to accept very much more than has yet been discovered or proved; such, for instance, as the spontaneous generation of living organisms from inorganic matter. We are prepared to accept this, and very much more, simply because we push the facts which we already have before us to their logical conclusion, and postulate that though there is certainly a distinction between living and dead *organisms*, there is no distinction between living and dead *matter*. All matter *is* Primordial Substance, and as such it is, in every individual form of motion, the activity of a Living Principle, and is conscious in its own proper degree and kind.

Primordial Substance is Universal Subject as well as Universal Object; and, as such, It is not merely the Root and Source of every individual form of consciousness which we may at present be capable of recognising, but It is an Infinite Consciousness from which no part of the manifested Cosmos can ever be separated in Reality.

We infer in others only what we know in ourselves. When we have learnt to identify ourselves with something more than mere sense impressions and surface consciousness, something more than mere physical and chemical changes of matter; when we have learnt to identify ourselves with those higher forms of motion of Primordial Substance which constitute the 'matter' of the higher Planes, and the vehicle of our own deeper, subconscious, or 'subliminal' self: then will open out to us in objective form that larger universe which at present enters only vaguely into our consciousness as if coming *from within*, as subjective and not objective.

But we have also to learn that what now appears to come from without, is in reality also *within*. Nothing can be

objectivised by consciousness which does not first of all exist in consciousness, in the transcendental Subject. And if at present this appears to be untrue as regards our individual consciousness, it is only so because we have not yet learnt the true range and extent of the real Self. Those who are familiar with the important results which have been obtained in recent years by a scientific study of certain abnormal phenomena of consciousness, of the certainty which now obtains that our normal consciousness is but a very small fraction of our real conscious self: will have no difficulty in understanding what is here advanced. The only question really is: how deep is this subconscious, or subliminal self? The answer which we here give is, that it is as deep as the Infinite Itself; that the self in Man is One with the Infinite Self; that his consciousness opens out by natural continuity on the Etheric Plane, and beyond: even to that highest Plane of Absolute Consciousness where ALL is known as an Eternal Now.

What hinders, then, that at present we are shut out from this larger consciousness? It is the province of Religion to answer that question, to tell us how to rebecome in consciousness that from which we have never in reality been separated; and such religion must be a religion of experience, demonstrable to and by each individual—in other words, it must be *scientific*.

But as our consciousness thus expands we shall be able to recognise other consciousnesses, other Intelligences, in forms of 'matter,' and cosmic processes, where at present we only recognise blind mechanical forces, which have no significance for us save as mere physical or chemical changes of matter, or mechanical movements of cosmic bodies.

This expansion of consciousness constitutes for the individual its *evolution*. The next step for ourselves is foreshadowed in those abnormal phenomena to which we have just referred, and with which we shall deal more fully in a subsequent chapter. It has sometimes been described as the possession of a 'cosmic consciousness.' Perhaps this may be an admissible term in comparison with our present limitations; possibly it is cosmic so far as our own particular Globe is concerned; or we might even stretch it to our Solar System. But beyond are larger Systems, Systems within Systems; and before us are Æons of—what? Shall we describe it as

anything else than a process of infinite Self-Realisation ; for what is the Cosmic Process if it be not the Infinite Realisation of the Infinite Self ?

To disclose the nature and conditions of this individual expansion or evolution is, in its deepest and widest aspect, the province of Religion ; but Religion unsupported by science or philosophy leads to strange forms of fanaticism, credulity, self-deception, and error. We must not allow ourselves to soar to transcendental regions without first of all laying a firm foundation in what we already know. Truth is not attained by cutting ourselves adrift from experience, but by recognising the limitations of experience. All experience is true, in its proper relation to the whole ; it is never true or complete in itself. In passing on to higher regions, to a fuller and deeper consciousness, we shall not abandon our past experiences, but transmute and illumine them with a higher knowledge.

It is not any *supernatural* world which we shall enter in any larger consciousness to which we shall ever attain, but one which is not merely a natural continuation of that in which we are at present objectively conscious, but which interpenetrates and reacts with that world at every point in space, and at every moment of time ; one to which, indeed, our real Self, our Higher Self, already belongs ; from which it has never been separated, did we but know and realise this fundamental Truth, that All Things exist in the Self.

To know and realise this, to know that all Powers in Heaven or in Earth are ours by birthright as " Sons of God," is the legitimate goal of all our efforts, of all our evolution. For evolution is essentially expansion of life. It is the individual life ever becoming more and more at one with that Infinite Life which lives and moves in ALL. This is the golden thread of Truth which runs through all the great World-Religions ; often obscured and lost, indeed, in man-made doctrines of heavens and hells, by priestcraft and superstition : but none the less always to be found in the pure original teachings. To know and to realise it is to know and to realise " eternal life."

But to do this we must identify *ourselves* with that which is eternal, with that Life which expresses Itself in all forms, which moves and acts in ALL. We cannot do this so long as we identify ourselves with a physical organism only, with

a form which changes from moment to moment. The Self with which we must identify ourselves is none other than the Changeless Eternal Self. Only in that Self which is " the inmost centre in us all " can we see Truth fully revealed: because in seeing everything from that point of view we see everything in its proper relation and proportion as parts of the One Great Whole.

" Extremes meet." Is it not now abundantly clear that on the basis of one Absolute Principle, or Primordial Substance, which is the Universe—and in which that which we call *motion* is on the one side Consciousness, and on the other side Matter—it is all one whether we say with the Materialist that without Matter there can be no Consciousness, or with the Idealist that without Consciousness there can be no Matter ?

This is, however, by no means all that appears in the intimate relation of these two extremes. Strangely enough we find direct confirmation of almost all the views which we have now advanced in a well-known work by a German Scientist of the highest reputation, but professedly written for the purpose of upholding the Materialistic position ; though the author prefers to call his Materialism " Monistic Philosophy."

We refer to the work of Professor Ernst Haeckel, *Das Welt-Räthsel,* which has had a very large circulation in an English sixpenny edition under the title of *The Riddle of the Universe.* Some extracts and a brief criticism of that work will serve admirably to elucidate several points in the fundamental concept of Primordial Substance, and will pave the way for the more constructive part of the Idealism which we wish to present.

We shall devote our next chapter to Haeckel, therefore ; but in the meanwhile we wish to remark that the arguments of Materialism may possibly be valid as against Supernaturalism, but not as against a Scientific Idealism which accepts every fact which Materialism educes, and which carries the deductions from those facts to their logical conclusion.

With Supernaturalism we have no intention of dealing. It has no real standing in science or philosophy, notwithstanding that it bulks so largely in the religious history of the world. Its ground is authority and tradition, not experiment and reason : and it is the latter only with which we are here concerned. Yet we must not overlook the fact that even Super-

naturalism may be said to be true, within its own limitations and definitions. For if we limit the term *natural* to that physical order of which we are now objectively conscious: then there is undoubtedly a *super*-natural region of the Universe; if we limit the operation of *natural law* to the phenomena of physical matter and force, on the understanding that physical matter is something *sui generis*: then there is undoubtedly a *super*-natural order of phenomena. But such limitations have long since been rejected by all rational thinkers. Science has been gradually pushing back the assumed line of demarcation between the natural and the so-called supernatural: whilst monistic philosophy has never recognised such a line at all.

With the definite discovery of the disintegration of matter, the last pretext for any such artificial line has finally disappeared; for it is the common or vulgar conception of matter as essentially different from spirit which lies at the root of all supernaturalism. From the supernatural point of view, Spirit and Matter are antagonistic; from the point of view of either Science or Idealism they are two aspects of the One Root Principle or Primordial Substance. The Universe being a Unity, being essentially continuous, homogeneous, co-ordinated, and correlated in all its manifestations and activities—as manifestations and activities of this One Changeless Principle—is *natural* in each and all of its infinite phases and expressions.

All points of view are true—within their own limitations; and it is necessary that we should clearly understand the limitations of the materialistic point of view: seeing that it claims to be based upon scientific facts which we ourselves accept, and because it is only by clearly understanding the limitations of Realism—which is at the root of all materialistic thinking—that we can adequately and rationally transcend those limitations, and allow ourselves to soar into the serene and inspiring atmosphere of pure Idealism.

The materialism of intellectual negation is perhaps as necessary a stage in the mental unfolding of the individual subject or Ego, at some point or other of its evolution, as is the materialism of its desires and pursuits in its attachment to a life of sense only: from which we have all to free ourselves. True advance is often made by way of running into the extreme of negation, in order that we may negate our own negation.

When we have proved by experience that negation leads nowhere, then we come to see that the Universe is not a negation but an *affirmation*. The turning-point in the life of the prodigal son is the extreme point of his outgoing in the negative direction. In many ways and repeatedly do we all play the part of the prodigal son. Strange that we can only know the right when we have experienced the wrong; that we can only know the good when we have experienced the evil; that we can only be free when we have been in bondage; that we must fall in order to rise. Strange that the Divine Spirit Itself must descend into matter or incarnation in order to realise Its Own Nature.

And if any now have learnt the lesson of sin and suffering; if, perchance, they hold themselves to be better than their fellows: let them remember that it is because they have learnt the lesson themselves in the bitter past, in ages of human evolution long gone by in which they themselves played the part, which others are only now playing; that perchance even in their last incarnation they were themselves such a poor and degraded one as now they shrink from with self-righteous scorn. Each individual must tread the same path of evolution, the *via dolorosa*, the way of the cross. The drama of the divine incarnation and crucifixion is not any isolated historical event, but it is the drama of the whole Human Race.

The negations into which we run are our stepping-stones to further and deeper affirmations. Experience is in the long run the only teacher. But at the same time we require for the intellect and reason a working hypothesis as to the nature of our being, which will enable us to advance definitely and boldly, on the basis of our present experiences, into regions where we can dimly perceive that life and consciousness must expand to a fulness and completeness which is denied to us in mere physical conditions.

All advance into the unknown is made by way of experiment, experience, and hypothesis. It is the scientific method; it is also the method of evolution as exemplified in our own life-history. But the essential of any hypothesis is not merely that it shall adequately explain known facts, but also that it shall offer scope for further advance.

Life is essentially expansion. It is essentially an affirmation, not a negation. To get more life, and still more, is the characteristic of every form of life, from the smallest monad

to Man himself, and who shall say how much beyond? This is manifested in that struggle for existence which science places as the mainspring of all organic evolution.

But on the lines of Materialism this struggle has no *raison d'être*, either in its inception or its consummation. It offers nothing finally either to the individual, to the Race, or to the Cosmic Process considered as a whole. The struggle of the individual, according to this theory, is simply to result in another individual, totally alien to the last, but possibly a little better able to carry on the same struggle. For what purpose—for what *lasting* purpose? None whatever, is the answer which Materialism gives. The World commenced devoid of organic life; it will finish devoid of life. The harvest of all our vast pain and suffering is reaped by none and nowhere. It is all a devil's dance of irresponsible atoms.

There are some who profess to believe this, but perhaps very few who really do so. It is absolutely contradicted by the whole instinct of Humanity, striving after a larger and fuller life than this world can give. It is contradicted by that ethical and moral sense which—as Huxley has so clearly shown in his essay on "Evolution and Ethics"—steps in at a certain point to oppose and supersede the law which governs the earlier stages of evolution, the law of the survival of the physically fittest.

The religious instinct in man is as strong, nay, stronger than any other instinct; stronger than any which can make for the survival of the fittest. All history testifies to it. That instinct demands a rational explanation and a legitimate goal. It is the intuition of a reality of our inner nature, not yet brought into objectivity in the gradually unfolding consciousness of the individual subject or Ego.

Supernaturalism is the first resort of an uninformed religious instinct. Scientific Materialism may possibly be the intellectual resort of a temporary loss of the religious instinct.

What we need, then, is a working hypothesis which shall be in harmony with all that we know of the laws of nature, and which shall at one and the same time admit of a deeper knowledge of those laws, and also of a natural expansion of the individual subject on lines instinctively felt to be possible and true. In other words, such an hypothesis must at one and the same time satisfy the demands of a definite scientific knowledge, and of the deepest religious instinct.

The fundamental ground of such an hypothesis must be the essential identity of the individual with the universal: the essential oneness of his inner subjective nature with the Universal Subject, as well as the oneness of his objective nature with the phenomenal world.

The hypothesis which best fulfils this condition is undoubtedly that of One Primordial Substance, Principle, or Noumenon, in which that which we call *motion* is, on its subjective side, Consciousness, and on its objective side, Matter.

Consciousness as Subject, and Matter as Object, are conceived of as arising together in the Infinite and Eternal Being —or Be-ness—of that One Absolute Principle which IS the Universe.

How or why this is so we shall leave for formal or speculative Philosophy or Metaphysics to determine. Our interest in it is not a speculative, but a practical one. It is of no value to us merely as a metaphysical proposition, but only in its immediate application to our own individual life and evolution. We are not concerned here with any theories as to the ultimate nature of Being: of which we can know nothing save what we find in the contents of our own nature. We can only solve that problem as we ourselves attain more and more to that fulness of life which lies in front of us as the natural result of our evolution; as we ourselves become—in consciousness—that which we are *de facto*.

True knowledge is not of something outside and beyond us, but of our own nature and powers. It is more than probable that in our most exalted and inspired moments we can only reach to a dim recognition of the real nature of our true Self: the majestic glory of that fulness of life to which we may lay claim, and to which we shall assuredly attain.

Our working hypothesis, then, is that glorious truth which has been proclaimed in all ages to those who had ears to hear—*the Divine Nature of Man*. It enables us to advance boldly with the fullest confidence into that region where authoritative religion raises the bogey of Supernaturalism, and orthodox science for the most part denies us any entrance at all.

When we know *Ourselves* we shall know the Universe; when we have conquered *Ourselves* we shall have conquered the Universe.

CHAPTER IX

SCIENTIFIC MATERIALISM—OR WHAT?

"We hold with Goethe, that 'matter cannot exist and be operative without spirit, nor spirit without matter.' We adhere firmly to the pure unequivocal Monism of Spinoza: matter, or infinitely extended substance, and Spirit (or Energy), or sensitive and thinking substance, are the two fundamental attributes, or principal properties, of the all-embracing divine essence of the world, the universal substance."—HAECKEL, *The Riddle of the Universe.*[1]

[1] p. 8. The quotations in the following chapter are from the fourth impression of the sixpenny edition of *The Riddle of the Universe.*

CHAPTER IX

SCIENTIFIC MATERIALISM—OR WHAT ?

CAN it be possible that these words of Haeckel are the words of a *Materialist*, of the same man who also writes that there is neither God, nor design, nor free will in the Universe ? In these words we have, in fact, an expression of as pure a form of Idealism as any we might wish to present. If we were ignorant of any further expressions of opinion on the part of the author, we should certainly not set him down as a Realist or an Atheist.

And what shall we say of Goethe and Spinoza, whose opinions he thus endorses ? We certainly cannot class their philosophy with either the realism, pessimism, or crass negation which we shall presently find in Haeckel's "Monistic Philosophy."

Here is another quotation in support of the one which we have placed at the head of this chapter, and which on the face of it discloses Haeckel as a would-be Idealist :—

"The first thinker to introduce the purely monistic conception of substance into science and appreciate its profound importance was the great philosopher Baruch Spinoza (1632–1677). In his stately pantheistic system the notion of the *world* (the universe, or the cosmos) is identical with the all-pervading notion of *God* ; it is at one and the same time the purest and most rational *Monism* and the clearest and most abstract *Monotheism*. This universal substance, this 'divine nature of the world,' shows us two different aspects of its being, or two fundamental attributes—matter (infinitely *extended* substance) and spirit (the all-embracing energy of *thought*). All the changes which have since come over the idea of substance are reduced, on a logical analysis, to this supreme thought of Spinoza's ; with Goethe I take it to be the loftiest, profoundest, and truest thought of all ages. Every single object in the world which comes within the sphere of our cognizance, all individual forms of existence, are but special transitory forms—*accidents*, or *modes*—of substance. These modes are material things when we regard them under the attribute of *extension* (or 'occupation of space'), but forces or ideas when we consider them under

the attribute of *thought* (or 'energy'). To this profound thought of Spinoza our purified Monism returns after a lapse of two hundred years; for us, too, matter (space filling substance) and energy (moving force) are but two inseparable attributes of the one underlying substance" (p. 76).

What could be more eminently satisfactory than this in support of the fundamental principles which we have endeavoured to elucidate in our previous chapters? With the exception of a little shuffling of the terms in the last sentence of the paragraph, to which we shall presently refer, we can accept it almost *verbatim*.

But can it be possible that this is from the pen of the same Haeckel who writes as follows?—

"The development of the universe is a monistic mechanical process, in which we discover no aim or purpose whatever; what we call design in the organic world is a special result of biological agencies; neither in the evolution of the heavenly bodies nor in that of the crust of our earth do we find any trace of a controlling purpose—all is the result of chance" (p. 97).

"Since impartial study of the evolution of the world teaches us that there is no definite aim and no special purpose to be traced in it, there seems to be no alternative but to leave everything to 'blind chance'" (p. 97).

"Our monistic view, that the great cosmic law applies throughout the whole of nature, is of the highest moment. For it not only involves, on its positive side, the essential unity of the cosmos and the causal connection of all phenomena that come within our cognizance, but it also, in a negative way, marks the highest intellectual progress, in that it definitely rules out the three central dogmas of metaphysics—God, freedom, and immortality. In assigning mechanical causes to phenomena everywhere, the law of substance comes into line with the universal law of causality" (p. 82).

"The peculiar chemico-physical properties of carbon—especially the fluidity and facility of decomposition of the most elaborate albuminoid components of carbon—are the sole and the mechanical causes of the specific phenomena of movement, which distinguish organic from inorganic substances, and which we call life, in the usual sense of the word" (p. 91).

"The peculiar phenomena of consciousness . . . must be reduced to the phenomena of physics and chemistry" (p. 65).

Many more quotations of a similar import could be given, but these will serve to show the contrast between what we may call Haeckel No. 1, the Idealist, and Haeckel No. 2, the Materialist. The one offers us the purely metaphysical concept of Spinoza, of *thought* and *extension* as the two attributes or

aspects of the one Substance; the other offers us a mechanical universe and a mechanical consciousness.

What is the explanation of this dual personality? Haeckel No. 1 is a would-be metaphysician, an idealist, and even a religionist. He continually speaks of the "soul," of "spirit," of the "Ego," and the "Non-Ego," of "the all-embracing divine essence of the world," of "destiny" (which surely implies design), of "the ethical craving of our nature," and of "our monistic religion."

Haeckel No. 2, on the other hand, is a materialist pure and simple; one with whom life and consciousness are mechanically caused. He denies the existence of a Subject or Ego, denies the immortality of the soul, denies indeed the existence of any soul at all, except as a "physiological abstraction like 'assimilation' or 'generation'" (p. 39). He denies the existence of God, or any kind of Divinity; denies the existence of design in the universe, and attributes everything to "blind chance."

Haeckel No. 1 is either sadly at variance with Haeckel No. 2, or else he is using the above terms in a very different sense from that which they commonly connote. When he speaks, for instance, of "the all-embracing divine essence of the world, the universal substance" (p. 8), does he really mean the same as Haeckel No. 2, who says that "the development of the universe is a monistic mechanical process, in which we discover no aim or purpose whatever"? And if he does mean the same thing, by what right does he speak of such a process as *divine*, or as originating in a "divine essence" or "substance"?

The term *divine* means specifically that which belongs to, or proceeds from, *God*. But Haeckel No. 2 denies the existence of God. Are we then to conclude that Haeckel No. 1 does not deny His existence; or, in the alternative, that he is guilty of a grave misuse of language?

Shall we look upon this singular contradiction of language as a case of 'double personality,' now so well recognised as an abnormal psychic phenomena in some individuals; or shall we regard it as a clear indication that even the would-be Materialist cannot get away from purely metaphysical abstractions and 'spiritual' ideas when his own premises are pushed far enough?

We shall leave this for our readers to decide, for we are

now only concerned with a criticism of Haeckel's work in so far as it throws a very considerable light upon certain principles which it is the object of the present work to elucidate.

We find, then, in the first place, that Haeckel starts with the fundamental concept of one ultimate Universal Substance, and he enunciates what he calls "the law of substance" as a thesis which is capable of explaining the whole universe from top to bottom—with the exception of the nature of Substance itself. The exception we may note here is somewhat important, though Haeckel himself tells us that we need not trouble about it. We shall give the quotation presently.

The following is his enunciation of the "law of substance":—

"The supreme and all-pervading law of nature, the true and only cosmological law, is, in my opinion, the *law of substance*; its discovery and establishment is the greatest intellectual triumph of the nineteenth century, in the sense that all other known laws of nature are subordinate to it. Under the name of 'law of substance' we embrace two supreme laws of different origin and age—the older is the chemical law of the 'conservation of matter,' and the younger is the physical law of the 'conservation of energy'" (p. 75).

With regard to the first of these laws he tells us that—

"At the present day the scientist, who is occupied from one end of the year to the other with the study of natural phenomena, is so firmly convinced of the absolute 'constancy' of matter that he is no longer able to imagine the contrary state of things" (p. 75).

Observe that Haeckel here uses the term "matter," not *substance*, and from other remarks we understand that he holds that substance, in its form of physical matter, is indestructible. It is difficult, however, to say for certain whether he means this in the above quotation. If he does, it is of course invalidated by the discovery of Radium.

If it be urged, however, that the law of the conservation of matter still holds good, because, at the furthest, we can only say that it is resolvable into etheric matter: we reply, that in the first place it has yet to be shown that Ether is matter, in any sense of the term in which we can understand it. We have already shown in Chapter VI. that we may call matter, *Ether*, but we cannot call Ether, *matter*. And if it be further urged that at all events it is *substance*, and as such is still

conserved: we can only say that there is no "discovery" in the fundamental thesis that whatever matter may be in its ultimate state as *substance*, that substance can never absolutely disappear into nothingness (though it may disappear into no-thing-ness, according to our present apprehension of 'things').

With the conservation of energy we have already dealt in Chapters IV. and V. As meaning the conservation of *mechanical* or dynamic energy—the invariable product of mass and velocity—we already know that it is not true. As applicable to anything but some limited or conservative system of matter, it is unproved: for we have no means of proving that the heat radiated into space as etheric activity, is "conserved." And if, again, it means the general proposition that when energy disappears in one form, it must still exist somewhere or other in the universe, in some *equivalent*: we can only say again that this is not a "discovery," but a necessity of thought and reason.

And yet Haeckel claims that this "law of substance" settles the "three transcendental problems," (1) the nature of matter and force; (2) the origin of motion; (3) the origin of simple sensation and consciousness (p. 6).

If these are "transcendental problems," they are essentially problems which can *not* be solved by any such generalisations as the conservation of matter and force; for this "law of substance" is not a statement of what matter and force are, but only of the mode in which our consciousness is able to apprehend certain of their phases and interactions.

It cannot be too clearly understood that all the so-called 'laws of nature'—which are sometimes stated as if they were a sufficient explanation of all phenomena, and even as if they were themselves some kind of *cause*—are in reality nothing more or less than statements of certain known actions and interactions within a certain limited range of phenomena.

They explain nothing beyond this: that, given a certain set of conditions, certain results will inevitably follow. The belief in natural law is simply the belief that like results follow from like causes; or, in other words, and more broadly, the universe is governed by law and not by caprice.

How much does the "law of substance" tell us of the *nature* of matter by telling us that it is "conserved"? How much does it tell us of the *origin* of motion by telling us that "the sum of force which is at work in infinite space and

produces all phenomena, is unchangeable"? (p. 75). How much does it tell us of the *origin* of simple sensation and consciousness? Absolutely nothing at all.

"The nature of matter":—that is just what we want to know. We trace it back to Primordial Substance, and how much do we know of the nature of *that* when we have postulated that it is something which can never be destroyed?

"The origin of motion":—how much we should like to know that! Again we trace it back to the innate motion of that something which we call Primordial Substance. How much do we know of the *nature* of that Substance when we have postulated that motion in or of that Substance is indestructible and eternal? If such be the case, then it has never been *originated* at all, save in connection with some particular individual time phenomenon.

And what is motion itself? Motion involves the two abstract principles of time and space. Anything which moves does so from one point of space to another, and takes a certain amount of time to do so. Does the "law of substance" explain to us what time and space are?

But what is Haeckel's own idea of this *Substance*, of which he is able to enunciate "the supreme, the true and only cosmological law"? Here is his answer:—

> "Only one comprehensive riddle of the universe now remains—the problem of substance. . . . We grant at once that the innermost character of nature is just as little understood by us as it was by Anaximander and Empedocles 2,400 years ago, by Spinoza and Newton 200 years ago, and by Kant and Goethe 100 years ago. We must even grant that this essence of substance becomes more mysterious and enigmatic the deeper we penetrate into the knowledge of its attributes, matter and energy, and the more thoroughly we study its countless phenomenal forms and their evolution. We do not know the 'thing in itself' that lies behind these knowable phenomena. But why trouble about this enigmatic 'thing in itself' when we have no means of investigating it, when we do not even clearly know whether it exists or not?" (p. 134).

"*Only one comprehensive riddle*"! And if it is not comprehensive of the "transcendental problems" which he has already "settled" by his "law of substance," of what in the name of common sense is it supposed to be comprehensive?

Is it really possible that Haeckel, or any one else, can believe that any problem whatsoever can be "settled" by

referring it back to some hypothetical "substance" of which we have in the end to confess that "we do not even clearly know whether it exists or not"?

And how, we might ask further, is it possible to postulate of such an *unknowable* any *law* whatsoever: much less "the true and only cosmological law"? When he says that, "we do not even clearly know whether it exists or not," does he mean that we do not even clearly know whether the universe really exists or not? Or does he mean that we do not clearly know whether the universe is a manifestation of that "substance," or possibly of something else? Strange confession, indeed, from one who has already explained the universe from top to bottom, and settled every "transcendental" question by his "law of substance." And can it be possible that this is the same Haeckel who so absolutely endorses "the loftiest, profoundest, and truest thought of all ages" of Spinoza?

We may leave it to our readers to decide whether this final negation of all that *The Riddle of the Universe* is written to prove: the concluding words of the whole book, that after all *he does not know* what he has all along so confidently affirmed—belongs to Haeckel the Idealist, or to Haeckel the Realist: or perchance to another Haeckel altogether.

We may remark, however, before passing on to consider the dual aspect of this Primordial Substance as presented by the two Haeckels respectively, that the failure to apply the "law of substance" to transcendental problems—which are essentially problems of meta-physics, and not of physics—in no way detracts from the value of the main ideas therein embodied as scientific generalisations. At the time of their inception, indeed, they marked an enormous advance upon previous ideas as to the correlations and transformations of matter and force, and might justly be regarded, in Haeckel's own words, as one of "the greatest intellectual triumphs of the nineteenth century."

We must now proceed to examine Haeckel's idea of the nature of the two fundamental *attributes* of Primordial Substance, that is to say, the nature of that duality which is the essential of all phenomena.

"Substance with its two attributes (matter and energy), fills infinite space, and is in eternal motion" (p. 5).

"Matter, or infinitely extended substance, and Spirit (or Energy),

or sensitive and thinking substance, are the two fundamental attributes, or principal properties, of the all-embracing divine essence of the world, the universal substance" (p. 8).

"This universal substance, this 'divine nature of the world,' shows us two different aspects of its being, or two fundamental attributes—matter (infinitely *extended* substance) and spirit (the all-embracing energy of *thought*). . . . Every single object in the world which comes within the sphere of our cognizance, all individual forms of existence, are but special transitory forms—*accidents* or *modes*—of substance. These modes are material things when we regard them under the attribute of *extension* (or 'occupation of space'), but forces or ideas when we consider them under the attribute of *thought* (or Energy) . . . Matter (space filling substance) and energy (moving force) are but two inseparable attributes of the one underlying substance" (p. 76).

This last quotation is—as we have already seen (p. 179)—his endorsement of Spinoza's philosophy.

These quotations are in substantial agreement with each other in so far as they all postulate that the "universal substance" has "two fundamental attributes or principal properties." But what are we to make of the bewildering alternatives which are offered to us as to the nature of these attributes? Let us abstract them from the above quotations, place them in tabular form, and see how they look.

THE UNIVERSAL SUBSTANCE

OBJECTIVE	SUBJECTIVE
Matter.	Energy.
Matter. Infinitely extended substance.	Spirit. Energy. Sensitive and thinking substance.
Matter. Infinitely *extended* substance.	Spirit. The all-embracing energy of *thought.*
Material things. *Extension.* Occupation of space.	Forces. Ideas. Thought. Energy.
Matter. Space filling substance.	Energy. Moving force.

On the objective or material side there is a fairly good agreement among these terms, though we must note the purely metaphysical idea of *extension* creeping in. But what are we to make of the subjective or spiritual side? Are all these terms really equivalent and interchangeable? On the basis of Idealism—possibly; and if also on the basis of Materialism, that is to say, of a *mechanical* view of the

universe, then they are the best possible illustration of the paradox that "extremes meet," which we have endeavoured to illustrate in our last chapter.

For if "thought" is the "all-embracing energy"; if an "idea" is the equivalent of "energy" or "moving force," as understood mechanically: then the mechanical theory joins hands with pure Idealism in postulating that all things are moulded by thought. Thought is consciousness, it is life: and without consciousness and life "matter"—or substance—is dead. The energy of the universe then is *not* mere mechanical motion of a dead substance, it is "the all-embracing energy" of living and conscious substance. At all events it is perfectly clear from this category, that thought is classified as an active, moving, energising principle; and as such it cannot possibly be *caused* by "physical and chemical processes," for it is itself the cause of these.

Thought, be it noted, is not here set down as a *form* of energy; it is energy itself, an equivalent term. These terms are supposed to be the final analysis of the universe as we know it; at the next remove they all disappear in the incognisable unknowableness of the Universal Substance.

Energy, as we have already seen, is essentially *motion*,—of something,—and we are here specifically told by one who holds that "the development of the universe is a monistic mechanical process," that that *motion* is *thought*.

But it is not difficult to detect in this extraordinary category of "attributes or properties," the subtle antagonism between Haeckel No. 1 and Haeckel No. 2. Observe Haeckel No. 2 fairly coming in by himself at the top of the list; whereas Haeckel No. 1 is represented by Spinoza's purely metaphysical idea that the two attributes are *thought* and *extension*, or that form or mode of consciousness which gives us the idea of an extended universe of objects external to the thinking Subject, and occupying *space*.

But the most serious indictment to be brought against this category from a materialistic or mechanical point of view is this: that if the ultimate substance of the universe be material,—no matter how sublimated that "matter" may be conceived to be,—no form of "matter" whatsoever can be one of its "attributes or properties." Matter cannot possibly be an "attribute" of itself.

Elsewhere Haeckel speaks of "the two fundamental

forms of substance, ponderable matter and ether" (p. 78); and in the category already given we have "infinitely extended substance" on the one side, and "sensitive and thinking substance" on the other. It appears, therefore, that "ponderable matter" is the equivalent of "infinitely extended substance"—which we know it is not: it being rather the ether which answers to that definition. But the ether is described as "sensitive and thinking substance"; something, therefore, which is evidently very different from ponderable matter.

What we must note here, however, is, that we have two different forms of substance—if not, indeed, two totally different substances—predicated as "attributes or properties" of the universal substance. This of course is pure nonsense. Two forms of one substance cannot possibly be "attributes or properties" of itself. We might as well say at once that water and ice are "the two fundamental attributes or principal properties" of steam. The illustration is apt, because Haeckel (No. 2) endorses Vogt's "pyknotic theory" of universal substance, and states that: "Its sole mechanical form of activity consists in a tendency to condensation or contraction" (p. 77).

Truth to tell, Haeckel No. 1 and Haeckel No. 2 play battledore and shuttlecock with this universal or "simple primitive substance" in a most remarkable manner; and as the question whether this substance is a dead mechanical thing, or the living energy of thought and consciousness, is the *crux* of the whole matter, we must follow up the game a little further.

Haeckel repudiates the old kinetic or atomic theory of substance, the theory, that is to say, that the ultimate form of universal substance consists of a number of exceedingly minute, hard, indivisible particles. He adopts the continuous substance theory which we have already elucidated in Chapter VI., the theory of one Primordial Substance "which fills the infinity of space in an unbroken continuity." But he further adopts Vogt's "pyknotic theory," which he states as follows:—

"The sole inherent mechanical form of activity of this substance consists in a tendency to condensation or contraction, which produces infinitesimal centres of condensation. These minute parts of the universal substance, the centres of condensation, which might be

called *pyknatoms*, correspond in general to the ultimate separate atoms of the kinetic theory; they differ, however, very considerably in that they are credited with sensation and inclination (or will movement of the simplest form), *with souls*, in a certain sense—in harmony with the old theory of Empedocles of the 'love and hatred of the elements'" (p. 77).

The *condensed* substance becomes "ponderable matter"—physical matter, in fact. The still uncondensed substance is ether.

"By that process (condensation) the primitive substance, which in its original state of quiescence had the same mean consistency throughout, divides or differentiates into two kinds. The centres of disturbance, which positively exceed the mean consistency in virtue of *pyknosis* or condensation, form the ponderable matter of bodies; the finer, intermediate substance, which occupies the space between them, and *negatively* falls below the mean consistency, forms the ether, or imponderable matter" (p. 78).

It thus appears that the original universal substance is of such a nature that although it is perfectly continuous and fills all space, it can still be *condensed* and not leave a vacuum! It also appears that ether is a still more rarefied form of substance than the universal substance itself! But what are we to make of the statement that the universal substance is in an "original state of quiescence" before it commenced to condense? We have already seen that Haeckel claims to have explained "the origin of motion" by the "law of substance": part of which is the proposition that motion is ceaseless and eternal. The present endorsement, therefore, of the *pyknotic theory* is a flat contradiction of Haeckel's previous thesis, that the universal substance, "with its two attributes (matter and energy) fills infinite space, *and is in eternal motion.* This motion runs on through infinite time as an unbroken development, with a periodic change from life to death, from evolution to devolution" (p. 5). (Query: how can *motion* change "from life to death"?)

We must leave these physical and mechanical difficulties, however, to the intuition of our readers, and pass on to the consideration of the *life* problem.

We are not told by Haeckel (No. 2) what it is which endows the universal substance with "its sole inherent mechanical form of activity," or "tendency to condensation." We might look at our table of "attributes," and hazard the

guess that it is "the all-embracing energy of *thought*." It would be most satisfactory if we were plainly told so, but we are not. Indeed, since it is a *mechanical* form of activity, we cannot connect it with life and consciousness at all, in the ordinary use of the term mechanical.

From the context, however, it appears that it is only when the universal substance is condensed, and becomes a *pyknatom*, that it can be "credited with sensation and inclination (or will movement of the simplest form)." For we read that: "The positive ponderable matter, *the element with the feeling of like or desire*, is continually striving to complete the process of condensation" (p. 78). We are not told, however, how it comes to acquire this *living* characteristic by the mere fact of "condensation."

But if we turn to our table of attributes, we find "sensitive and thinking substance" on the *opposite* side to ponderable matter, on the higher or spiritual side. We are still further mystified when we are told later on that: "The two fundamental forms of substance, ponderable matter and ether, are not dead, and only moved by extrinsic force, but they are endowed with sensation and will (though, naturally, of the lowest grade); they experience an inclination for condensation, dislike of a strain; they strive after the one, and struggle against the other" (p. 78). Finally (?) we are told (p. 86) that "the inherent primitive properties of substance—feeling and inclination"—are "*the active causes*" of the "primary division into mass and ether—the ergonomy of ponderable and imponderable matter."

So then it appears that *both* forms of substance are "not dead" (*i.e.*, they are alive). They *both* "experience an inclination for condensation," whereas we have previously been told that it is only the "positive ponderable matter" which strives to condense, and that the imponderable matter —the ether—"offers a perpetual and equal resistance." How anything can result from such a "perpetual and equal" balance of forces, whether mechanical or life forces, we are wholly at a loss to understand.

But if we are to accept the dictum that "the two fundamental forms of substance are not dead," which Haeckel says is "indispensable for a truly monistic view of substance, and one that covers the whole field of organic and inorganic nature" (p. 78); then we have arrived at exactly the point

which we desire as pure Idealists; we have arrived at the point that, Primordial Substance being "not dead," it is a living, moving, active, conscious, thinking Principle.

For observe that "the two fundamental forms of substance, ponderable matter and ether," are—according to Haeckel's own theory—Primordial Substance. They are both the same substance, in the one case condensed, in the other rarefied. The absurdity of calling these two forms of the one substance "attributes or properties" of itself is hereby clearly apparent.

It will be seen, however, that we are in substantial agreement with Haeckel's postulate, that the concept of Primordial Substance as being "not dead" is "indispensable to a truly monistic view of substance"; only we cannot accept at the same time the postulate of Haeckel No. 2, that the cosmos is a "monistic mechanical process." The two views are fundamentally and radically opposed to each other.

The very essence of life is spontaneous or innate motion; motion originating from within, as distinguished from mechanical motion—motion produced by the application of external force. We cannot be too clear on this point. Mechanical motion is motion of a machine or mechanism; and no one ever credited a machine with "sensation and will," even "of the lowest grade," or with spontaneous innate motion.

We may readily grant that if the universe is simply a perpetual motion machine, and nothing more, then it may be called—on the basis of one universal substance—a monistic mechanical process. And we might even further grant that certain parts of that machine—living organisms, for example—might have the *appearance* of spontaneous motion: an appearance, however, wholly illusory if traced right back to universal substance.

Such a view is apparently that of Haeckel No. 2. But if such were the case we should certainly *not* find in our final analysis that a "feeling of like or desire" was the *cause* of the original motions of the universal substance: for we have already postulated that that motion is the *cause* of the feeling. As a matter of fact we could never find a *feeling* at all, in any intelligible sense of the term. It is impossible to credit a machine of any kind with likes and dislikes, or with "sensation and inclination" in any degree whatsoever. If language is to

be used in this way, we may as well say at once that the rebound of two billiard balls in collision with each other is caused by their dislike of collision ; and then say further that the collision is the cause of the dislike.

We are specifically told in connection with the pyknotic theory that " the feeling of like or desire " (for condensation) on the part of " ponderable matter," in conjunction with the feeling of " dislike " on the part of " the negative imponderable matter," is the *cause* of that ceaseless struggle between the two elements, and is " the source of all physical processes."

There is obviously, therefore, a flat contradiction here between the two Haeckels. With Haeckel No. 2 the whole phenomena of life and consciousness—in which we must certainly include sensation, will, inclination, desire—are mechanically caused ; they are phenomena in physics and chemistry. With Haeckel No. 1, on the contrary, these innate characteristics of life and consciousness are themselves the *cause* of these same mechanical movements, *i.e.*, the original process of condensation and the resultant physical and chemical changes in matter. Thus one asserts to be a *cause* that which the other asserts to be an *effect.*

Extremes do *not* meet here ; it is simply a question of the proper use of language. If a machine can have likes and dislikes, or sensation and will : then it is *not* a machine—to put the matter in a somewhat Irish form.

Matter, or Primordial Substance, cannot be at one and the same time, " not dead," but moved by " sensation and will," to suit the Idealism of Haeckel No. 1 ; and dead, and " moved only by extrinsic (mechanical) force " to suit the Materialism of Haeckel No. 2.

From the foregoing it is abundantly evident that if we do not attribute life and consciousness to Primordial Substance itself, as inherent or innate qualities, we must either fall back upon something outside or beyond Primordial Substance, something, that is to say, which is *not* Primordial Substance, but which acts upon or through it—in which case we open the door to all forms of dualism and supernaturalism ; or else we must introduce life and consciousness in a perfectly arbitrary manner at some stage or other of the cosmic or evolutionary process. We are not at all certain which of these alternatives is the real Haeckel theory ; indeed we do not think that he is at all clear himself, seeing that at one time or another he asserts all three.

Thus on page 8 he asserts that there are two kinds of substance, "infinitely extended substance" (matter), and "thinking and sensitive substance" (spirit). These must be two different substances, if language means anything; because, as we have already pointed out, two different forms of the same substance cannot possibly be attributes or principal properties of itself. They may be *aspects*, but certainly not attributes or properties.

In our table of attributes we find "sensitive and thinking substance" on the *spiritual* side, where we should certainly expect to find it if there is any real distinction between one kind of substance and another. But on page 78 we are told that *both* "the two fundamental forms of substance, ponderable matter and ether," are "not dead"; and further that "the positive ponderable matter" possesses "the feeling of like or desire" (for condensation), whilst "the negative imponderable matter" experiences "the feeling of dislike." Why then on page 8 is a distinction made between one form of substance, which we are led to infer is *not* "sensitive and thinking," and another which is so? It appears to us that a substance which experiences "like or desire" is just as much "sensitive and thinking" as one which experiences "the feeling of dislike."

Is it not abundantly clear that this attempt on the part of Haeckel to mix up physics and metaphysics is a hopeless failure? We may make our choice between a purely mechanical universe, a universe in which the ultimate Primordial Substance is dead, and certain motions thereof are called *life* movements out of compliment to their *apparently* spontaneous character; or a universe in which Life and Consciousness are true *attributes* of the Absolute Eternal Principle to which all phenomena must be referred in their ultimate analysis. We cannot have both, as Haeckel tries to have. The result is merely a hopeless confusion and misuse of language.

Life and Consciousness in any such Absolute Principle will not be infinitely *less*, but infinitely more than anything we can know or experience as such. As we approach nearer and nearer to that Infinite Source of ALL, Consciousness, like motion, approximates nearer and nearer to Absoluteness. There are a large variety of so-called psychic phenomena which are proof positive of the existence of unfathomed depths of consciousness within or behind that individual conscious-

ness which we conventionally speak of as ourselves. Men of Haeckel's type ignore these phenomena altogether.

We cannot have a Universal or Absolute Principle which is at one and the same time both dead and alive. If it is dead, no amount of mechanical movement can ever make it alive. Seeing indeed that life and consciousness are actual facts of our experience, that they have, to say the least of it, just as much claim to a real existence as matter itself—possibly infinitely more, since it is only by them that matter is known at all—it would seem that we have no choice but to make these the true attributes of our Absolute Principle; not in any stinted degree, but in a fulness and completeness of which even our own consciousness, in the most exalted degree of which we have any conception, can be but the faintest reflection.

And if any should think that by some possible word-juggling the true issue is still obscure, they may read with profit the following words by one who was Haeckel's equal in his own special province of biology, and immeasurably his superior in philosophy and dialectic :—

"Nobody, I imagine, will credit me with a desire to limit the empire of physical science, but I really feel bound to confess that a great many very familiar and, at the same time, extremely important phenomena lie quite beyond its legitimate limits. I cannot conceive, for example, how the phenomena of consciousness, as such and apart from the physical processes by which they are called into existence, are to be brought within the bounds of physical science. Take the simplest possible example, the feeling of redness. Physical science tells us that it commonly arises as a consequence of molecular changes propagated from the eye to a certain part of the substance of the brain, when vibrations of the luminiferous ether of a certain character fall upon the retina. Let us suppose the process of physical analysis pushed so far that we could view the last link of this chain of molecules, watch their movements as if they were billiard balls, weigh them, measure them, and know all that is physically knowable about them. Well, even in that case, we should be just as far from being able to include the resulting phenomena of consciousness, the feeling of redness, within the bounds of physical science, as we are at present. It would remain as unlike the phenomena we know under the names of matter and motion as it is now. If there is any plain truth upon which I have made it my business to insist over and over again it is this. . . ."

"It seems to me pretty plain that there is a third thing in the universe, to wit, consciousness, which, in the hardness of my heart or head, I cannot see to be matter, or force, or any conceivable modification of either, however intimately the manifestations of the phenomena

of consciousness may be connected with the phenomena known as matter and force. The arguments used by Descartes and Berkeley to show that our certain knowledge does not extend beyond our states of consciousness appear to me to be as irrefragible now as they did when I first became acquainted with them some half-century ago. All the materialistic writers I know of who have tried to bite that file have simply broken their teeth. . . ."

"As I have said elsewhere, if I were forced to choose between Materialism and Idealism, I should elect for the latter."—T. H. HUXLEY, *Science and Morals.*

CHAPTER X

THE NOUMENAL AND THE PHENOMENAL

"We live in succession, in division, in parts, in particles. Meantime, within man is the soul of the whole; the wise silence; the universal beauty, to which every part and particle is equally related; the eternal ONE. And this deep power in which we exist, and whose beatitude is all accessible to us, is not only self-sufficing and perfect in every hour, but the act of seeing and the thing seen, the seer and the spectacle, the subject and the object, are one."—EMERSON, *The Over-Soul.*

CHAPTER X

THE NOUMENAL AND THE PHENOMENAL

THERE is a strange reluctance on the part of many noted scientists, both physicists and biologists, to recognise any intelligent design in the workings of nature; a strange disinclination to admit a purpose and an end in view in the great evolutionary process.

Probably this is largely due to the fact that the idea which has been for so many centuries presented to the Western World in the authoritative name of Religion, concerning the nature or character of an Intelligent First Cause, has been that of a *supernatural* Deity.

Science does not find anywhere in the operations of natural law any evidence of supernatural interference; and indeed if the God of the orthodox theologians really is *super*-natural, how can He possibly be found in *nature* where He does not exist?

But, we shall be told, He has *created* nature, and natural laws are His laws. Possibly; but a God who only works in or through natural law is indistinguishable from nature herself. Nature reveals the existence of an efficient 'First Cause' or Noumenon,[1] but cannot possibly reveal a *super*-natural cause except by miracle, *i.e.*, by arbitrary interference with a known and otherwise inevitable sequence of cause and effect. We do not as yet, however, know enough of the universe, of the laws of matter and force on the higher Planes of Substance, to say whether any particular incident is a miracle in this sense or not. An event, a happening, may be very startling to us, and may even upset all our ideas of the natural sequence of cause and effect, and yet be perfectly

[1] Strictly speaking, *Noumenon* is not 'First Cause.' It is rather the true and essential nature of Existence or Being, as distinguished from Phenomenon; the latter being the illusive and transitory time and space modes of manifestation in consciousness of the One Reality.

natural as an exercise of higher powers than any with which we are as yet familiar.

The one thing which orthodox theologians so commonly insist upon is precisely that the Natural World is *not* the Spiritual World. The natural and the spiritual are indeed, in their view, essentially antagonistic. Not merely do we leave the natural behind us when we die, and enter the spiritual, but the natural order must finally pass utterly away, leaving only the spiritual "for all eternity." But if the spiritual has no relation to the natural, as cause and effect which may be known as "natural law," then its existence can only be known by miracle; while the existence of an absolute miracle can never be proved until we know the whole universe from top to bottom. The existence of a miracle can, in fact, only be asserted by an arbitrary limitation of the term *natural.*

Science has no doubt from time to time foolishly asserted the impossibility of certain phenomena, and has thereby itself arbitrarily endeavoured to limit the sphere of the natural; but as soon as the phenomena themselves have been recognised as facts, they have been quietly rechristened and included in the recognised sphere of natural law. Religion, on the other hand, in order to bolster up its supernaturalism, has simply laid claim to what is wonderful and unfamiliar as belonging to its own supernatural province.

Science does not admit a miracle, and joins hands here with Monism, which considers the Universe to be a Unity, and therefore *natural* in all its aspects or phases.

The question of *creation* is also one on which science finds itself uncompromisingly opposed to the orthodox theological conceptions. Nowhere in nature does science find any evidence of anything having ever been *created* in the theological sense of the term; whilst the authoritative account of the method of creation which is accepted by orthodox religion, is diametrically opposed to what science does find to have been the actual order of procedure in the evolution of our Earth.

Science finds in nature a rigid sequence of cause and effect; the fundamental principle which is deduced from what we do know of nature being, that nothing can come into existence without an antecedent cause, which—although we may not be able to trace it—is as *natural* in its operation as are those sequences of cause and effect which we are able to trace.

Nothing ever comes out of nothing; nothing ever disappears into nothing. Everywhere is transformation, equivalence, change, evolution, devolution — but never creation, in the theological presentation of the term.

Now there is no question, as we have fully indicated in our previous chapters, as to the existence of some Absolute Unitary Principle, Power, or Noumenon at the Root of all that we know or can include in the term *Nature*; but there is very great question as to whether that Power is in the slightest degree truly conceived and represented in the orthodox theological conception thereof.

With that question, however, we have no concern here. The great conflict between Science and the Church in these matters is nearly over; and authoritative Ecclesiasticism is no longer able to hold back the tide of scientific knowledge. With the loss of the temporal power, the most potent weapon of the Church fell from her hand; and although denunciation and invective of the grossest kind was freely employed to discredit the leading scientists during the past century, and is even now still used in some quarters, yet these also have now lost their sting and power to wound.

Only those who have still some authoritative system of 'truth' to uphold, can be afraid of looking at the whole facts of their nature, and of the universe in which they live.

It is one thing, however, to reject a theological God, and quite another thing to reject a Principle of Life, Consciousness, Intelligence, at the Root of all the operations of nature. It is one thing to reject a supernatural region, or order of the universe, distinct from our present order, to which these are said to belong; but quite another thing to reject a superphysical Plane, where possibly they may find a legitimate and *natural* sphere of activity which can perhaps hardly even be guessed at by our present limited and conditioned knowledge and consciousness.

Setting aside, then, all theological controversies, we must look at this question from a purely scientific and philosophical point of view, since it is one of the utmost importance for an understanding of the order of nature, and the relation of our own life and consciousness thereto.

Those who cannot recognise any design or any conscious Intelligence at work in the infinite variety of nature's marvellous adaptations and beauty of form and function, are

of course under no necessity to search for anything beyond a mere mechanism. We have previously expressed the opinion that the question of design in nature may perhaps be one of perception rather than of argument; but there are one or two aspects of this matter which it will be useful to consider here, as they bear directly upon the question of the process or method of evolution with which we must now deal from various points of view.

There is undoubtedly a *mechanism* in the order of nature with which we are familiar. There appears to us to be a rigid sequence of *mechanical* cause and effect, and we are fully justified in postulating—arguing from particulars to universals—that however deeply we might penetrate into what we know as Nature, *i.e.*, an external, objective, phenomenal universe, we should always find a similar principle, an invariability of 'natural law'—*so long as we are dealing with phenomena only.*

The importance of this reservation will appear presently.

From this apparent mechanism of nature it is argued by the pure Materialist that there is no room anywhere, in either the causes or the sequence of phenomena, for any design, purpose, or intelligence; consequently, everything in the universe, our own life, thought, and consciousness included, is governed by a rigid determinism. Nothing could possibly be other than what it is, nor could we possibly act otherwise than as we do. There is no free will, and—in the sense that everything is mechanically determined—there is no chance.

We may take Haeckel as a representative of this class of Materialistic Determinists, and see what he has to say about it.

On page 97 of the *Riddle* we read:—

"Since impartial study of the evolution of the world teaches us that there is no definite aim and no special purpose to be traced in it, there seems to be no alternative but to leave everything to 'blind chance.'"

"The general law of causality, taken in conjunction with the law of substance, teaches us that every phenomenon has a mechanical cause; in this sense there is no such thing as chance" (p. 97).

"Mechanism (in the Kantian sense) alone can give us a true explanation of natural phenomena, for it traces them to their real efficient causes, to blind and unconscious agencies, which are determined in their action only by the material constitution of the bodies we are investigating" (p. 92).

In the first of these quotations we see all purpose or design in the universe repudiated; in the second we find a mechanical cause asserted for all phenomena; while in the third—well, let us see what we really are told in the third.

We may read the sentence in this way :—the real efficient causes of natural phenomena are blind and unconscious agencies which are determined in their action only by natural phenomena (" the natural constitution of the bodies we are investigating ").

For if this " natural constitution " of bodies is not itself a natural phenomenon, what is it ?

The whole question is precisely as to what this material constitution of bodies—atoms and molecules—really is; and therefore when Haeckel asserts that this material constitution is the *cause* of natural phenomena, he is simply begging the whole question, and moving in a vicious closed circle.

This sentence is, in fact, an excellent example of the inconsistency of statement and deduction—or rather assertion —which permeates the whole of Haeckel's work, and vitiates the whole argument of the *Riddle*; if indeed what is merely a string of assertions can be called an argument at all.

For what we are really told in the above quotation is simply, that the real efficient causes of natural phenomena are agencies which are determined by natural phenomena; in other words, the *causes* are " determined in their action " by the *effects*—a method of putting the cart before the horse, or of explaining things in terms of themselves, to which we previously had occasion to refer in dealing with his conception of Universal Substance.

But where, indeed, does this Universal Substance come in at all in the sentence we are now considering ? Surely the " real efficient cause " of all natural phenomena must be this Universal Substance; and the material constitution of bodies—which we are now told are determining causes—must be determined or caused by the nature of this Substance.

We have already seen, however, that Haeckel can tell us nothing about the nature of this Substance, of that One Principle which sub-stands phenomena; that, indeed, he does not really know whether it exists or not. Nevertheless, that does not prevent him from asserting that those particular manifestations of this Substance which we are conscious of in the form of physical matter and mechanical energy, are

indestructible and eternal; which assertion he calls the "law of substance."

The question still remains; is not consciousness a natural phenomenon? If it is not, then there must be a supernatural region to which it belongs—which Haeckel denies. If, on the other hand, it is a natural phenomena—which Haeckel asserts—how is it that its "real efficient cause" is "blind and unconscious"? Nowhere does Haeckel explain to us this true "Riddle of the Universe."

Haeckel proceeds to take Kant to task for stating first of all that "there can be no science without this mechanism of nature"; and subsequently asserting that mechanical causes are inadequate as *final* causes.

We rather think, however, that Haeckel himself has postulated something very near to the same thing when he tells us that "spirit (the all-embracing energy of thought)" is one of the two fundamental attributes of "this universal substance, this divine nature of the world."

We are forgetting, however, that this is Haeckel No. 1, who is constantly trying to rise to metaphysical heights as to the "real efficient cause" of all phenomena, and is as constantly dragged back into pure Materialism by Haeckel No. 2.

If you really pay attention to all that he says, you find that he never really gets away from a Monism of physical matter; his ultimate Substance is never really anything more than an attenuated gas, for he postulates that physical matter is *condensed* out of it; and yet the rest can continue to fill all space!—while, as Mr. M'Cabe himself says: "the sensation and will he attributes to atoms are obviously figurative."[1]

Haeckel's system professes to be essentially Monistic, just because of the existence of this Universal Substance; and yet we see that not merely at the last, but practically all through his work, he repudiates it. All phenomena he explains in terms of phenomena, and not in terms of this ultimate Substance; his "real efficient cause" is really "the material constitution of bodies," and from this he never in substance departs.

We should not have troubled ourselves here with this analysis of Haeckel's position, did it not lead us directly to the point which it is essential for us to understand: the distinction between Noumenon and Phenomenon.

[1] M'Cabe, *Haeckel's Critics Answered*, p. 54.

We see clearly that even Haeckel, thorough-going Materialist and Determinist as he is, is forced back occasionally, in spite of himself, to an unknown Noumenon ; yet nowhere in the *Riddle* does he really acknowledge this Noumenon as the efficient cause of Phenomenon. This must necessarily be so in any materialistic system, which can only move along the illusive horizontal line of cause and effect ; being, in fact, no more than a one-dimensional system, which cannot even enclose a superficies, much less a solid. The much vaunted " law of substance " is itself only *phenomenon* ; it is *how* we apprehend the Noumenon, and not *what* that Noumenon really is.

Materialism is simply the attempt to explain some phenomena in terms of others, ignoring altogether the main question as to how phenomena can exist in consciousness at all, or what is the " real efficient cause " of consciousness itself, by which alone phenomena are known.

If Haeckel analyses all phenomena into the two terms of matter and motion, and refuses to recognise any prime-cause for these in an ultimate Noumenon, which, as such, can be neither of them : then his system is not Monistic, but Dualistic. A Monism which postulates a merely hypothetical Substance of which we can only say that " we do not even clearly know whether it exists or not," is unworthy of the name.

Whatever we may postulate as to the " two fundamental attributes " of that " all-embracing divine essence of the world,"—to use the words of Haeckel No. 1—there can be no question, first of all, that if we really do postulate that it has attributes, we must clearly accept its existence ; and, secondly, that it must be the efficient cause of its two fundamental attributes or aspects, and of all phenomena, subjective as well as objective.

Now we certainly do postulate this Absolute Noumenon ; not as a mere hypothetical something which may or may not exist, but as that which, in the true sense of the word *Reality*, is the only thing which really does exist.

Further, we find it impossible to postulate that the two fundamental attributes or aspects of that Noumenon are merely matter and force, understood in a physical or mechanical sense. The eternal ceaseless *motion* (activity) which in its subjective aspect is Life and Consciousness, and in its objective

aspect the phenomenal world of matter, is *the one primary attribute* of this eternal Noumenon.

We know that consciousness exists just as clearly as we know that phenomena exist—perhaps more clearly—and we can no more dispose of the subjective or consciousness aspect of the One Noumenon, by whatever name we may call it, than we can dispose of its phenomenal aspect.

To exist, to have *life*, in any real sense of the term, is to be *active*. The more active we are—in consciousness—the more really we live.

But further : to really exist, to have real *Being*, is to exist always, eternally ; and not so as a mere matter of extension in *time*, as a mere matter of endlessness, but with a *quality* of life which is measureless, full, free, unconditioned, exultant.

Such a measureless fulness of Active Being, beyond all possible human conception, is the only *attribute* we can give to that One Noumenon in whom, and by whom, and through whom all things in Heaven above and the Earth beneath exist. In that One Life we participate ; it is *our* life and being, and the life and being of the whole Universe ;—nay, did we but know it and realise it, It is *Ourself*.

To attain to a full and complete realisation of our oneness with this Infinite Life, to attain to a full and complete knowledge of our own nature, is the subjective or consciousness side of the great objective world-process of evolution. In that realisation we finally rise above all illusions of time and space into the immeasurable fulness of Eternal Life—the Eternal Now and Here.

But in the meantime we are largely hampered by physical Plane conditions ; and, in our normal modes of consciousness, spirit and matter, or consciousness and phenomenon, appear to be as wide apart as the poles ; while phenomena appear to have a separate existence quite independent of our individual consciousness, or indeed of any form of consciousness whatever.

Now it is not difficult to see that where consciousness is associated with *individual* forms of motion, it may itself assume an individual or separated character. The cosmic process, viewed as phenomenon, presents to us precisely this aspect of limitation ; all objective forms appear to be separate or discrete. Nevertheless, we are sufficiently advanced in our discriminating or reasoning powers to be able to postulate the existence of a fundamental unity underlying this apparent diversity.

The cosmic process presents itself to our individual consciousness as a cycle of involution and evolution; of limitation followed by liberation; of an outgoing from the One Noumenon followed by a return thereto. The whole process must of course, in a certain sense, be an illusion. The Noumenon can never *become* other than what It eternally IS.

We cannot form any conception as to what the nature of the whole cosmic process must be in the Life or Being of the One Noumenon.

> "Whether Its will created or was mute,
> The Most High Seer that is in highest heaven,
> He knows it—or perchance even He knows not." [1]

Nevertheless it is not merely possible, even with our present powers, to rise far beyond the illusions of the senses, the mere external appearance and crude realism of what things *seem* to be, but we can also gather from the operation of our own subjective nature a tolerably consistent theory of the operation of the Universal Self; one which, at all events, will serve us in the meanwhile as a working hypothesis.

In the contents of our mind we find the activity of a conscious Subject or Ego. Under normal conditions we are not aware of any direct connection between that subjective activity and any objective result; our thoughts usually appear to be wholly subjective.

But under certain abnormal conditions our thoughts may become objectivised; they may give rise in consciousness to the impression of an external objective appearance. A word or sentence, a person or thing thought of, a scene or event may arise in our memory, or from the depths of our sub-consciousness, and appear as an actual *objective* reality.

Many names have been given to this fact at different times. By some it is called *clairvoyance*, by others *hallucination*. Names, however, are nothing; the fact is everything. The fact itself is indisputable, and is of the profoundest significance.

In dreams we have a similar objectivisation of the contents of the subjective self. In ordinary dreams the process is usually confused and chaotic, simply because the ordinary individual has not yet learnt to control this phase of his conscious activity. But dreams may be, and often are as real, as clear, and as distinct as *phases* in the experience of the indi-

[1] *Rig Veda* (Colebrooke).

vidual, as are those which are associated with his normal waking consciousness on the physical Plane.

There is every evidence to show that this objectivisation of thought is the normal operation of the mind on its own Plane ; and that to consciousness on that Plane, thoughts are *things*. We habitually call up a *mental image* of familiar things ; and if it is possible for that image, under certain abnormal physical conditions, to become a thing which is *seen* objectively—so much so that it may be mistaken by the seer for a real physical object—it is certainly within the region of hypothesis that on a higher Plane of consciousness this objectivisation may be the normal operation of the conscious self. Nay, it even suggests that what we commonly regard as realities, the physical objects which seem so independent of our individual consciousness, are in reality as unsubstantial as those creations of the mind which we now class as dreams or hallucinations.

But if the self, the conscious Ego, can use the mind for the purpose of calling up mental images—whether objectivised or not—that *self* must be using the mind as an instrument in just the same sense that *we* use our physical bodies. Thought is as controllable by the active conscious Ego as is action on the physical Plane.

Thoughts are the activities of the *self* on the mental Plane.

Unfortunately we are not accustomed to exercise the same control over our thoughts as we are over our actions. Moreover, we are accustomed to think of the *self* from the lower or physical standpoint rather than from the higher ; to associate *ourselves* with our temporary physical form, instead of with our permanent Spiritual Ego.

But now let us think of the self as *above* the mental Plane, considered as a Plane of substance ; let us think of the self as acting from a still higher Plane upon the substance or matter of the mental Plane—what then will be the nature of that action as affecting the substance of the mental Plane ? We may conceive of it as being a direct action upon that substance, whereby it is thrown into vibrations or *forms* which are immediately objective to the consciousness of the higher self.

We necessarily speak here still as if substance were something existing independently of the self ; and so far as any individual self or Ego is concerned such language may possibly be legitimate. But we are getting very near now to the One

Self, the Self of all Selves, the One Noumenon ; and in that One Self *Substance* does not exist as an independent reality ; to say that it does is to stultify our fundamental position as Monists.

Primordial Substance considered as the root of all cosmic phenomena is simply the objective *correlative* of the activity, life, motion, Being, of the One Noumenon.

We may conceive, then, of the phenomenal Universe as being the objectivised thought of the One Self, universally and eternally present in the Absolute Consciousness of that Self ; not, however, as the *process* which we know, but as a complete whole.

Every individual form of consciousness we may regard as being in some way a *limitation* of the Self by Itself : an entering into, and dwelling in, the forms of its own creation.

Do not we ourselves clearly repeat this process, by seeking ever to *objectivise*, to make *real*, or to *realise*, as we call it, our desires and ideals ?

But whilst thus, within the compass of our small individual lives, we repeat or reflect the universal process, we must bear in mind also that we are largely conditioned by a larger cycle or cycles of evolution related to consciousness, or selves, or monads, higher than our own. We belong in the first instance to Humanity as a whole. The individual can never really be separated in his evolution from the larger unit, while the larger unit is in its turn only part of some still larger whole. Atoms or Worlds, Solar Systems or immeasurable Universes—all are bound together by invisible bonds infinitely more *real* than the mere outward appearance. System within system acts and interacts on every Plane of the Cosmos ; in outer form apparently separate, discrete, independent ; in inner nature never so, but always ONE with that Infinite BEING by whom, and in whom, and through whom all things whatsoever in Heaven above, or in Hell below, are brought forth into manifestation.

We have already seen that the modern materialistic method of studying life and consciousness is to trace them back to rudimentary and primitive organisms, and there, losing sight of them in the next remove, in *inorganic* matter, to finally deny that they are anything more than complex phenomena of " blind and unconscious agencies " and " mechanical causes."

Now we must clearly recognise that, so far as individual

forms of consciousness associated with physical matter are concerned, we have an evolutionary series rising gradually out of rudimentary forms of matter—atoms and molecules, where we are altogether unable to distinguish the characteristics of *life*—up to the present powers of our own mind and consciousness, and possibly beyond.

But why should we conclude therefrom that the consciousness which is omnipresent is " in some rudimentary form " ?—to quote Herbert Spencer's words in the paragraph from the last page of his *Autobiography*, which we give at the commencement of Chapter VII. We see clearly that evolution —which is all that inductive science deals with—presupposes involution. Is, then, that which *in*-volves more rudimentary even than those lowest forms with which we are acquainted ? Is that which is the *efficient cause* of all phenomena, less than the smallest of all its manifestations ?

Consciousness, Herbert Spencer suggests—and his suggestion is of course based upon conclusions arrived at by inductive scientific methods—is omnipresent. But forms of physical matter are not omnipresent ; they do not fill all space, only a very infinitesimal portion thereof. In what then can this omnipresent consciousness inhere ? Obviously only in the omnipresent Primordial Substance.

And there, in that *Substance*, on its own Plane, so to speak, is that Omnipresent Consciousness less even than that of a speck of protoplasm, less than nothing ; or is it not rather infinitely *more* than anything which any individual form can ever manifest ; ay, even though that *form* be that of Brahman or Jehovah Himself, the *creative* divine potency of this our present cycle of cosmic evolution. Beyond Brahman lies Parabrahm ; beyond Jehovah the Ain-Soph.

In ordinary conventional language we might possibly say that we, as human beings, possess a mind and consciousness almost infinitely removed in degree from that of the lowest rudimentary organisms ; and that we possess this as the result of an evolutionary process.

But while it is true that *as individuals* we may be said to possess these as the result of an evolutionary process, it is obviously not true—on the basis of a Universal Consciousness —that Consciousness itself has evolved. What we should say is, that an infinite variety of individual forms are able to *manifest* the inherent nature of this Universal Consciousness

in an infinite variety of ways; and it would seem only natural and logical that the continuity or universality of Consciousness should reveal itself on the form or objective side, not in a number of discontinuous, discrete, or isolated manifestations, but in something continuous, orderly, and progressive, such as we find in the sequence of organic evolution, and which we are compelled to postulate of the whole Cosmic Process considered as a cycle of involution and evolution.

Some have supposed that this same vast Cosmic Process is evolutionary for the Absolute Itself; that the Absolute represents the *result* of the process. This we cannot accept. The Absolute cannot *become*. And even so, has not the Absolute already had an Infinity in which to evolve, and so to reach an infinite degree of life and consciousness—infinitely removed, that is to say, from any "rudimentary form"? This, however, is simply anthropomorphising the Absolute, by applying to It our present conceptions of *time*.

Granted, then, the existence of individual forms of consciousness, as manifestations in varying degrees of the inherent nature of the One Universal Consciousness: how or in what way shall we measure the possibilities or limitations of such individual forms? Is man, in fact, the highest individual form of life and consciousness in the Universe? Is man even —as we commonly know him—the highest form of life and consciousness associated with our Earth, or evolved in the present order of things?

We may answer this question in the words of the late Thomas Henry Huxley. In *Essays upon some Controverted Questions* (p. 36) we read as follows:—

"Looking at the matter from the most rigidly scientific point of view, the assumption that, amidst the myriads of worlds scattered through endless space, there can be no intelligence as much greater than man's as his is greater than a black beetle's; no being endowed with powers of influencing the course of nature as much greater than his as his is greater than a snail's, seems to me not merely baseless, but impertinent. Without stepping beyond the analogy of that which is known, it is easy to people the cosmos with entities, in ascending scale, until we reach something practically indistinguishable from omnipotence, omnipresence, and omniscience."

"If our intelligence can, in some matters, surely reproduce the past of thousands of years ago, and anticipate the future of thousands of years hence, it is clearly within the limits of possibility that some greater intellect, even of the same order, may be able to mirror the whole past and the whole future."

Shall we form our conclusions, then, as to the nature of this Universal Life and Consciousness by going back to rudimentary forms; or shall we not rather do so by acquiring in the first instance a deeper knowledge of our own nature and powers; by seeing in these, even to the highest and fullest which we can possibly imagine of them, but a feeble reflection of that which the One Noumenon must possess as the *efficient cause* of all? Shall we go back to more feeble beginnings, or shall we not rather go forward to the infinite possibilities of the future?

Our concern, indeed, is very little with the past, and very much with the future. The history of the past is useful to us only as enabling us to understand this vast process of evolution through which we as individuals are now passing; as enabling us to claim for our future an achievement commensurate with that which the past discloses.

To understand, therefore, the nature of Life and Consciousness we must not take them in their rudimentary forms, we must study them in the largest and fullest possible expression which is open to us. If we ourselves can exercise a measure of consciousness almost infinitely removed from that of lower individual forms, it is certain that, in that Infinite Noumenon from which we derive our powers, consciousness will so much transcend anything which we can at present know or imagine as practically to cease to be consciousness at all in the sense in which we at present understand it; as that which appears to be the correlative of phenomenon; as the self or subject in opposition or contrast to the not-self or object. In the Real Self, in the One Noumenon, subject and object must necessarily be ONE.

If now we bear in mind the great principle that all cycles of evolution are interrelated, that smaller cycles are parts of larger ones, and these again of something still more universal—an apparently infinite series of expansions, which nevertheless we find ourselves compelled to terminate or unify in the One Absolute—we shall see that, in the first instance, the key to our own smaller individual cycle which is represented by one single physical life-period, must be looked for in its relation to some larger cycle.

The immediate physical relation is quite obvious. We are part of Humanity, of a vast cycle of evolution represented at this particular stage by what we now know as Man;

represented at an earlier stage by something which stands in the same relation to Man as we now know him, as the embryo or the germ-cell does to the child which will presently appear; represented at a later stage by a divine manhood, as yet as little realised by the infant Humanity, by Man as we now know him, as the infant can realise the powers which will presently be his as a full-grown man.

We are part of Humanity, of one great divine cycle of evolution or activity, appearing to us, from our time and space point of view, only as an *evolution*. Each individual life plays its part in that evolution as a whole; each individual life-thread must run throughout the whole of that evolution, must be part of the one organic whole: even as our physical organism is built up of lesser lives, and these of lesser still, but retains its organic wholeness through all the flux of material, of atoms, and molecules, and cells, which go to make up its individuality.

One atom, many atoms, perhaps billions of atoms or cells might conceivably vary their life and conduct to a very large extent without appreciably affecting the body as a whole; and so also we may conceive that millions of individuals may vary their conduct within what, to them, may be very wide limits, and yet not appreciably affect the evolutionary course of Humanity as a whole. Each individual, in any one incarnation, does but play the part of a single atom, as it were, in the great organic Whole of Man, "made in the image and likeness of God."

Nevertheless, each individual, even in one single brief physical life-period, must assuredly have *some* share in the process; just as each individual atom of our body accounts for *something* in the sum-total of the organic whole.

When we look at the Solar System as a whole, to whose larger cycle of evolution our Earth belongs, it is further conceivable that individuals may do very much as they like without altering in the slightest degree the predestined course of evolution of that larger System. The larger cycles will certainly work out their appointed destiny quite independently of anything which the individual may or can do in any one lifetime, or in many lives; just as we may design and carry out a certain course of action quite independently of any individual atom, molecule, or cell of our body. Were all individuals to unite in one common purpose, however, there

is no saying what might not be effected, even on a cosmic scale.

We find here, then, that the key to the apparent *mechanism* of nature is a double one. In the first place our own individual cycle is so small, and our knowledge of the processes of nature —extended as they are over such vast periods of time, and effecting therein such marvellous transformations—also so small and limited, that it is impossible for us to recognise the real nature or the direct action of the larger cosmic Power, Intelligence, Mind, Consciousness, or Life, which must necessarily be associated therewith, as an emanation from the One Root Principle, from the One Absolute Life and Consciousness.

In the second place, we see that the nearer we can come in consciousness to the higher Planes of the Cosmos, the nearer we approach in thought to the point of view of the One Unity, the more *phenomena* must appear in their true relation and proportion; not as something absolutely separate and distinct from Consciousness, but as the natural correlative and complement thereof.

The mind without matter, the idea without form of expression, consciousness without phenomenon;—or, matter without mind, form of expression without idea, phenomenon without consciousness;—what could any or either of these be without the other?

All ideas must become materialised in *form*. The artist, the poet, the musician, the mechanic—what are any of these unless they can express themselves in outward visible form; unless they can *realise* the creative fire which burns within them?

And what is that creative fire—which burns brightest and intensest in those to whom we ascribe *genius*—but the reflection of a divine fire, universal as Life itself, and productive in the One Divine Mind of all this vast Cosmos, as the expression in form of the formless Divinity. What, indeed, is *genius* but the ability to bring through to this lower Plane some larger measure of this divine fire which burns within each one of us: ay, even in divinest degree, yet fails to penetrate our grosser senses, and the clouds of material ideas and desires in which we enwrap ourselves; even as the glorious Sun shines ever above, yet fails to penetrate a vapour or smoke-laden atmosphere.

In this necessity for self-expression, for self-realisation, we touch perchance the great necessity of the Divine Itself. Assuredly there is a necessity which binds God even as it binds Man—the necessity of His own Nature. Assuredly also Man " made in His image " must reflect and reproduce this divine necessity—he must realise *himself*.

And since he is one with the Divine in fact—though apparently separate as an individual consciousness—this divine necessity in him assumes a dual aspect. As an individual he must fill in his share in the great cosmic process, he must be bound by the larger necessity of that process, by what appears to him to be the iron laws of nature. But that process being a divine self-realisation, or self-expression, and that which expresses itself being necessarily more than the expression, being more than any individual form in which it can express itself, even as the artist is more than the picture or the statue, and the mechanic more than his machine : so man, being in reality one with the divine, having within him a spark of the divine fire, must not merely express in his individual capacity the *will* of some larger cosmic Power, but must ever realise *himself* in larger and diviner degree, learning thereby to transcend more and more the *cosmic* forms of expression, even as he now transcends those forms which he himself is able to mould with his present knowledge of the " laws of nature."

In that higher realisation of his true nature, phenomenon will not cease to exist ; for assuredly phenomenon is part of the divine necessity, the necessity of the divine to realise Itself in objective form. But in that higher consciousness we must realise that it is the Self which makes phenomenon, and not phenomenon which makes the Self ; we must realise that Life and Consciousness are the reality, not matter and form.

So long as we continue to regard the universe from the lower or outer material or individual point of view, from the standpoint of phenomenon merely : we can never attain to a realisation of the fundamental Unity which we are intellectually compelled to postulate as lying at the root of All.

' Down here ' we exist on a Plane of appearances and illusion, *because of the limitations of the individual.* We exist on a Plane of apparent separation, individualisation,

mechanism, and *matter*. We exist at the *objective* pole of the great duality of subject and object. The apparent necessity or limitation of this Plane is only the reverse, or opposite pole, of the absolute free will of the Plane of Reality. Necessity and free will, like all other pairs of opposites, meet and vanish in the One Absolute Noumenon. The essence of what we know as consciousness is contrast, duality, polarity. Good cannot be known without evil, nor light without darkness; or rather let us say that free-will cannot be known without limitation, and the limitation is what we call *evil*. So also the Self can only be known by its opposite, the not-self.

Between these two poles the individual Ego—like all else in the universe—fluctuates, from life to death, and from death to life; or let us say rather—since life is universal—from subjectivity to objectivity, and from objectivity to subjectivity.

This universal cyclic principle of involution and evolution, which we are bound to deduce in our generalisations from particulars to universals, operates in the individual man or Ego, in leading him down into matter or physical incarnation; not once, but many times, because of his connection with the larger cycle of Humanity as a whole. He must share in the whole cycle of evolution of Humanity considered as a larger unitary cycle of which his own individual cycle is only a smaller part.

And who shall say to what still larger cosmic cycle the whole evolution of Humanity belongs? Our Earth is physically part of a larger unit—the Solar System—which, since the outer physical or phenomenal is only a symbol of the inner spiritual or noumenal, must certainly be represented in that *inner* noumenal by some unitary Cosmic Power, some supreme Logos: supreme, that is, in His own System; but subordinate nevertheless—as being *individual*—to the One Absolute Noumenon.

Possibly such supreme Logos may be regarded as the *personal* God of our System; the personal *creator* of that System; though still far removed from the One Absolute, which can never be *personal*. Might we not possibly conceive that even as our own evolution appears to compass a greater and ever greater individual perfection, even so the cosmic process represents the evolution of some such mighty Logos; that out of all this time phenomena and infinite stress and strife,

some infinitely majestic Being is evolved, incomparable in power and glory, unimaginable and incomprehensible to our feeble conceptions of what Life and Being really mean.

Deep are the mysteries of Life and Consciousness, infinite their possibilities — and Life and Consciousness are our inalienable possession. Death is an impossibility; Life can no more be destroyed than motion, for motion *is* the activity of the One Life. It is only the personal limited self, the time phenomenon, which passes away; the real Self is immortal and eternal.

And even so have philosophers and sages, and divinely inspired men taught in all ages to those who had ears to hear. Such has ever been the doctrine and teaching of those whom we recognise as the great ones of the Earth, who have seen Truth with clear eyes; the eternal Truth which lies beyond the mere appearance of things; the Truth that the self in man and the Self of the Universe *are one and the same.*

"Never the spirit was born; the spirit shall cease to be never;
Never was time it was not; end and beginning are dreams!
Birthless and deathless and changeless remaineth the spirit for ever;
Death hath not touched it at all, dead though the house of it seems!"

The true "law of substance," of that which sub-stands all phenomena, is not the conservation of physical matter and mechanical energy, but the conservation of Life and Consciousness. Phenomenon can never be explained in terms of itself; it requires a Noumenon to explain it.

If we postulate, as Haeckel does, that the Noumenon is merely a material substance, capable of expansion and contraction, of condensation and rarefication: we are really no nearer to a *final cause* than we are when we deal with mere physical phenomena.

However far back we may go in phenomena, *so long as we are dealing with phenomena only*, we are dealing with an endless chain of appearances, the real cause of which we have not touched, and cannot touch. We may disintegrate matter as much as we like, and split the atom to the last imaginable fraction—though in truth there is no *last*—to an hypothetical final particle, or an equally hypothetical universal Substance: so long as we only think of it as *matter* we are still face to face with the fundamental problem as to the relation of conscious-

ness to phenomenon ; of that which perceives to that which is perceived ; of the self to the not-self.

And so we are forced back upon the Idealistic position, that phenomenon is only understood by its complement and correlative, *i.e.*, Life and Consciousness.

We reach this position scientifically by understanding that the resolution of matter into Primordial Substance is not merely a *disintegration,* but a *dematerialisation.* Matter is only *matter* considered as the opposite pole of Spirit, Life, or Consciousness.

The physical, the material, the objective, the phenomenal, can never be other than *symbolical* ; can never be the " thing in itself." They are the expression and the language, the painting, the writing, the sound, the outward and visible sign of the inner *creative* power ; *creative* in that it thus brings forth in an infinite variety of manifestations the infinite contents of ITSELF.

If the mind can surely bring forth and embody in visible sign and symbol some *idea,* it is because the *idea* already exists in the mind, because the thing is already *there* as an *idea* ; nor can the *thing*—which as a *thing,* as an objective form in time and space, is *created*—ever adequately represent the pure *idea.*

The Universe is the great work of art of the Infinite Inexhaustible SELF. It expresses the infinite contents of that SELF in an infinite variety of ways ; but never as a *thing,* never as *phenomenon* can it wholly, adequately, or completely express or exhaust the contents of the Infinite Mind and Consciousness. That Mind and Consciousness—or rather that LIFE—is the Noumenon, the First Cause, the Causeless Cause of all that ever has been, or ever can be expressed as Phenomenon. ALL is eternally THERE, but in a manner utterly beyond the comprehension of our present consciousness, limited and conditioned as it is by material ideas, and time and space perceptions. Though we *must* postulate an Absolute Noumenon, that Noumenon can only be expressed by a paradox. It is not-this and not-that ; for it is not merely this and that, but also its opposite. It is ALL.

It is as inevitable that the creation, bringing forth, or process of the great Art Production of the Universe should be *mechanical,* as it is that there should be a mechanical sequence of cause and effect from the painter's brush to the colour effect

produced on the canvas, or from the chisel of the sculptor to the form evolved from the marble. We see the process, and call it "the laws of Nature"; but those laws are not the *why*, they are only the *how*.

The *how* we may study as phenomena, in the infinite modes of matter and force which appear to consciousness as a not-self.

The *why* we can only understand as we ourselves attain to realisation of our at-one-ness, or at-one-ment, with that Infinite Life which is the Noumenon of ALL.

Attaining to that at-one-ment we are no longer man, or even super-man, but verily something which no pen can describe, nor can it even enter into the heart of the lower man to conceive.

Here and there saint and seer, partially attaining to a realisation of the great mystery of at-one-ment, have dimly adumbrated its indescribable transformation, transfiguration, or transmutation.

Nor are we dependent for this on the records of the past. Such seers are with us to-day.

CHAPTER XI

COSMIC EVOLUTION

"Who knows the secret? Who proclaimed it here?
Whence, whence this manifold creation sprang?
The Gods themselves came later into being—
Who knows from whence this great creation sprang?
That, whence all this great creation came,
Whether Its will created or was mute,
The Most High Seer that is in highest heaven,
He knows it—or perchance even He knows not."

Rig Veda (COLEBROOKE).

CHAPTER XI

COSMIC EVOLUTION

Of all the brilliant achievements of Science and Philosophy which have distinguished the nineteenth century as that in which the light of Truth has once more penetrated and overcome the darkness and ignorance imposed upon the Western World by Ecclesiastical Authority, there is none which surpasses that which has definitely placed the principle of *Evolution* on a firm foundation of inductive knowledge, and made it impossible to regard it otherwise than as one which is universal in its application.

Every addition to our knowledge of Nature goes to show more and more clearly that Evolution is the natural law, the governing principle of all phenomena, of every individual ' thing ' which manifests itself in the external objective world of time and space.

Commencing with physical matter itself, in which we can trace a definite order and sequence in the formation of the chemical elements and atoms, we pass by a scarcely perceptible transition to the lowest forms of ' life,' to protoplasm, hardly more than an exceedingly complex chemical molecule; and from thence to lowly forms of living organisms which are little more than aggregates of simple cells.

From these a gradually progressive series can be traced in which the organism increases in complexity, and definite parts become specialised for particular functions. These gradually evolve to the more complicated forms of plants and animals, whilst in the latter kingdom we also find a progressive series at the head of which stands Man, whose principal characteristic is an enormously specialised and developed brain and nervous system, the instrument on the physical Plane of the conscious thinking Ego.

Man himself exhibits the same evolutionary progression, in his physical, mental, and moral nature, from the lowest

aborigines, scarcely more than animals, up to such examples as Plato and Shakespeare, Gautama Buddha and Jesus Christ.

But it is not merely the material substance of our Earth, and the living organisms belonging specially thereto, which fall under this great cyclic law, and work out their predestined course in accordance therewith.

Looking out into the Cosmos we see that a similar law must apply to the whole Solar System of which we are a part; and not to the Solar System merely, but also to the millions of Suns and Worlds scattered in Infinite Space; each and all, System within System, work out through countless ages those great cyclic changes by which they emerge from the latency of Primordial Substance, run their appointed courses, and return to THAT from whence they came. The whole Cosmic Process, in great and in small, is summed up in the one word, *Evolution*.

But what *Power* is it, then, which moves throughout this process, which is latent or innate in Primordial Substance before It evolves or unfolds? Evolution shows us that the ceaseless infinite *motion* which lies at the root of all phenomena is no mere fortuitous heterogeneous clashing of atoms in space—whether endowed with a "rudimentary form of feeling and desire" or not—which might result in one thing just as well as another, but more conceivably in nothing but chaos and confusion. Not thus does that Infinite Power which lies behind and within the manifested Cosmos reveal Its intrinsic nature. The infinite motion of the Universe is an ordered sequence of unfoldment. Every 'thing' which appears in the world of phenomena, which comes down, as it were, and is materialised on this present Plane of our Consciousness, must necessarily exist first of all *in some form or other* on a 'higher' Plane: even if that *form* be no form in any material sense in which we can apprehend it, but even such as is the form of a thing in our own mind before we materialise it in physical matter—the form of an *Idea* in the mind of a thinker. Everything which appears in the phenomenal world works out in smaller or greater cycles a predestined or designed course.

We need not hesitate to use the word *predestined* as if it should imply a fatalism which would be destructive of all intelligent human effort. Man himself predestines much in the kingdom which he rules, the kingdom of his own body,

where, to lesser lives, he is verily a 'god.' Our physical body is a cosmos in itself, and millions upon millions of *lives* have their incarnations and cycles of evolution within that body, their *destiny* determined by the thoughts which we think, and the actions we design and carry out.

But we cannot escape from the conclusion that everything which is designed is also predestined, given the unchangeableness of the will of the designer, and the necessary power to accomplish his design. The Universe as we know it either has or has not been designed; it either has or has not an Infinite Intelligence behind it. The type, the *idea* of everything which comes into manifestation, either does or does not exist in the latency and potentiality of Primordial Substance, in the universal germ-cell from which it subsequently evolves. In the one case there is no room for chance; in the other case there is no room for evolution.

Possibly the question of design is not so much one of argument as of perception. Those to whom the Universe is a dead world of mocking ghosts, those to whom evolution, although an "ordered change," commences in negation and ends nowhere—to them it is even so, and it lies not in the power of every man to open the eyes of the blind; neither does that inner faculty which sees the vision beautiful come to the man who strives not after it. It is the fruit of many, many lives, a later product of the evolutionary process through which each individual passes.

In our previous chapters, in dealing with the phenomena of matter and force, we have treated these principally from the objective or dynamical point of view, and we have seen that inductive science leads us to resolve all the phenomena of the Universe back to two primal or root factors—Primordial Substance and Motion.

But we have also seen that besides objective phenomena there is a subjective something which we call Consciousness, and that consciousness being innate in Primordial Substance we may establish a parallelism between that which is objectively *phenomenon*, and subjectively *consciousness*. In each case the last analysis of either of these is Motion of Primordial Substance.

Now consciousness implies *life*. Life and consciousness are really one and the same thing, in so far as there can be no life without consciousness, and no consciousness without life.

Nevertheless, it is necessary to make a distinction between the two in connection with the cosmic or evolutionary process, because the one is an active principle, whilst the other is passive or receptive. Life is will, desire, energy ; consciousness is thought, sensation, emotion. Life is the outgoing, constructive, formative principle ; consciousness is the indrawing, synthetic, resultive principle : that which, as it were, reaps the fruit of the activity of life, which is its own *alter ego*. Life is the *Self* considered as actor ; consciousness is the same *Self* considered as observer.

The cosmic process, considered as an objective phenomenon, presents to our consciousness in some degree those qualities and aspects which belong to the active or life side of the Universal Self ; whilst the subjective or consciousness aspect can necessarily be known only as reflected in our own subjective nature and consciousness.

Consciousness is the inner fact ; life is the outer fact. Consciousness is the knower and experiencer ; life is that which is known and experienced : *i.e.*, our own activity, or the activity of the One Self, from which we are never really separated either in our life or our consciousness.

Having, therefore, already considered the cosmic process from the point of view of matter and force, we must now turn our attention to it from the point of view of the Cosmic Life and Consciousness ; we must look at it from ' above ' instead of from ' below,' from within rather than from without.

The more we are able to do this, the nearer shall we approach to an understanding and appreciation of Truth ; to that " Inmost Centre in us all where Truth abides in fulness." For that Inmost Centre is the One Absolute Reality, the Changeless Eternal Self, whose Life and Activity is expressed in all phenomena.

It is of the utmost importance, if we are to take our destiny into our own hands, that we should realise that all phenomena, however ' material ' they may appear to be to our lower or sense perceptions, are in reality phenomena of life and consciousness of different degrees or kinds ; and that, however individual, separate, or even antagonistic they may appear to be, they must all be derived from, and—in their ultimate analysis—are never other than the activity of the One Self.

Physical matter, *quâ* matter, is not usually associated with the idea of life. It is customary to speak of matter as *dead*.

We only speak of it as *living* when it exhibits a more or less *organised* form of structure, of which protoplasm is the most elementary example. But the scientific distinction at the present time between living matter and dead matter is a very thin one indeed. Every advance of scientific knowledge tends to break down more and more the distinctions and differences between certain groups or classes of phenomena which were previously considered to have no relation whatever the one to the other, but to belong to distinct and separate portions of ' creation ' between which there was a great gulf fixed. Every advance of science, in fact, tends to unify more and more the whole phenomena of cosmic evolution, to fill up the ' gaps ' in our knowledge of nature.

The hard materialistic idea of matter which regarded the chemical atom as an inert, rigid, irreducible minimum of something possessing mass or inertia has utterly broken down. Atoms have been shown to be exceedingly complex structures, as truly *organised* as protoplasm itself, or any of the more complex forms of life which we speak of as living organisms. There is no arbitrary line of distinction between ' dead ' matter and ' living ' matter, and we have already seen that Idealism joins hands with Materialism in that larger philosophy which regards the whole Cosmos as the expression of the activity of one Universal Substance.

The lowest forms of 'living' matter simply mark the point at which we, with our limited consciousness, can recognise a form of activity which at all corresponds with that which we know as our own life activity.

Having postulated, indeed, that all matter *is* Primordial Substance, by what possibility can we think of it otherwise than as Living Substance. Can one part of Primordial Substance deprive another part of its innate Consciousness, any more than it can deprive it of that innate *motion* which is its *life* aspect ? In what sense can Primordial Substance really be dead in its aspect as physical matter on our present Plane of consciousnesss, any more than it is dead, and therefore motionless, on the highest or Spiritual Plane ?

Is it dead because it is apparently spun into atoms and molecules in which—in their individual form—we are too dull to recognise anything but mechanical motion ? Is it dead because it aggregates into crystals, and minerals, and rocks, which we cut, and melt, and mould, and chip at our will and

pleasure ; with little thought of the real nature of that which we manipulate ; with little enough thought, indeed, that we never do aught else than touch and handle that mysterious Substance which is the living garment of the One Divine Life ?

Looked at from above, all matter, on whatever Plane, is never other than the One Substance ; it is the " seamless garment " of the One Life. Throughout the whole cosmic process, in great and in small, it is the objective or active aspect of the One Infinite and Eternal Self who IS the Universe.

Cosmic matter presents to us the activity aspect of the ONE as motion or energy, but it does not manifest the consciousness aspect on the physical Plane until it becomes organised into certain more or less complex forms of ' life.' It might possibly be contended, however, that the selective capacity which undoubtedly exists in physical atoms, and which amounts to a certain degree of *awareness*, is the manifestation of a rudimentary form of consciousness ; indeed we have already seen that Haeckel postulates that to be so. Why then, if all matter is a manifestation of life—and, therefore, of consciousness also—does the latter disappear, or almost disappear, in physical matter ?

The answer is to be found, in the first place, in the fact that matter being a *cosmic* product, the life and consciousness associated with it must also be cosmic rather than individual in any sense in which we can understand individuality. The individual atoms of matter certainly represent individual *lives* of a certain order, just as the individual cells of our own bodies may be regarded as individual units, which are, however, sustained and energised by the larger cosmic life of the whole body, while at the same time that larger cosmic life of the body is independent of what may happen to individual cells, or even to large groups of cells. So by analogy we may conceive of cosmic matter as being evolved and energised by some vast Cosmic Intelligence, whose nature we are utterly unable at present to understand.

In the second place, physical matter considered in its individual or atomic aspect represents to our consciousness the lowest point in the involution of *motion* ; and, therefore, also the lowest point in the involution of life and consciousness. Life is always and essentially motion, but it is not always, in its individualised forms, recognisable as spontaneous or self-originated motion ; and it is only with this latter kind of

motion that we usually associated the idea of life. The more any individual form of life is able to initiate its own actions by self-conscious choice—that is to say, the more it exhibits the characteristic of free will—the higher we place it in the scale of evolution.

If, therefore, we regard the whole cosmic process from the point of view of life and consciousness, it presents the appearance of an involution or limitation of these in successive Planes of 'matter,' commencing with Primordial Substance, and gradually individualising itself, as it were, on each successive Plane, until, in physical matter, it reaches the lowest point in the descending arc of the cycle.

This involution, however, is only the first half of the cosmic process. The second half is evolutionary or devolutionary in its nature. From the lowest point in physical matter commences the return or upward half of the cycle, and life and consciousness gradually emerge from matter, or manifest through matter their inherent and essential characteristics in ever-increasing degree in those various organisms through which we trace the evolution of 'life' on this globe, up to Man as we know him at the present time.

Let us bear in mind in this connection the great principle of *polarity*, the dual aspect of the ONE. Each pole is the antithesis of the other. At the lower pole, life and consciousness disappear in 'matter' and inertness; at the higher pole, life and consciousness are supreme, unlimited, infinite, free.

We see, therefore, that the involution of life and consciousness, *i.e.*, the first half of the cycle, is equivalent to the evolution or formation of matter; whilst the second or return half of the cycle, being the evolution of life and consciousness, should be accompanied by a corresponding involution or devolution of matter.

Let us think back for a moment from physical matter to Primordial Substance.

We trace the activity of all forms of physical matter to the activity of etheric substance. Certain forms of motion of etheric substance—which we may conceive of as more or less complicated systems or aggregations of vortex-rings—combine together to form the physical atom. In doing this, motion becomes involved or limited, for the otherwise free motion of the vortex-rings on the etheric Plane is now confined

within the limits of the physical atom. Physical matter is in reality never anything else than etheric substance; but it is that substance, or rather a portion of that substance, *limited and conditioned as to its motion.*

These limited and conditioned forms of motion, which are now the physical atoms, are capable of further combinations among themselves, they exhibit certain affinities for each other, and by reason of these affinities they combine to form the innumerable varieties of substances with which we are acquainted.

Now let us consider one single chemical atom, of Hydrogen, for example. We may conceive of this atom as consisting of a number of vortex-rings of etheric substance; the number is of no consequence to the principle involved, but we may say one hundred.

This atom of Hydrogen then, consisting of one hundred etheric atoms or vortex-rings, exhibits certain *external* characteristics, it will act and react in certain definite ways with other physical atoms. It has a certain *mass*—in the technical sense of the term—and it shows certain preferences for combination with other physical atoms. In so far as it exhibits these *external* characteristics or properties, *and only to that extent,* it is a physical atom. If it exhibited no external characteristics whatsoever, if it did not respond in any way to external physical stimuli, if it had no *mass* and no chemical affinity, it would be non-existent on the physical Plane, though it might have a very real and substantial existence on the etheric Plane.

The etheric vortex-rings of which the physical atom is built up, do not, when in a free state, exhibit these characteristics, and therefore are non-existent to our physical senses.

Our complex of etheric vortex-rings, therefore, which we call a Hydrogen atom, although never anything else in *substance* than the Ether itself, becomes a physical atom by reason of a *limitation* of motion; that limitation resulting in the exhibition of certain limited characteristics—mass, chemical affinity, etc.—which constitute what we know as physical matter, and in its aggregate the physical Plane. Physical matter as such is only a bundle of conditioned qualities of etheric substance: just as ice is water, but water *limited* or conditioned as to its fluidic properties.

Now let us consider the internal motions of the atom.

It is built up, say, of one hundred vortex-rings, and each of these vortex-rings, in a free state, not bound within the limits of the physical atom, we might consider to be a true etheric atom. But these etheric atoms do not cease to be etheric atoms when they aggregate into a physical atom, and their otherwise free motions become confined within the limits of that atom. Doubtless each etheric atom by reason of such limitation is unable to exhibit the same characteristics, the same *external* energy on its own Plane as it could when free; but still it is none the less an etheric atom, just as a Hydrogen atom must be considered to be still a Hydrogen atom, however much it may enter into combination with other atoms to form compound substances.

The *internal* activity of an atom of physical matter we may thus consider to be in reality an etheric activity. On the etheric Plane it would be an external activity, while the internal activity of the etheric atoms would be an external activity on a still higher Plane. The etheric atoms, even though bound within the confines of the physical atom, must, therefore, be conceived of as acting and reacting in their own proper manner on their own Plane.

In Chapter V. we have seen that the life and activities of the physical Plane are absolutely dependent upon the activity of the free Ether; we are dependent upon it for all the phenomena of light, heat, electricity, magnetism, etc.; and in all these phenomena it is not the physical atom as such which acts and interacts with the Ether, but the constituent etheric atoms which act and interact with the free Ether.

The physical atom, as such, only acts and interacts with the other physical atoms. *Quâ* physical atom it is only a certain limited or conditioned aspect of Ether. It is these aspects or qualities only, and not the real substance, which constitute its claims to be a physical atom. The substance is never other than Primordial Substance.

When we consider, therefore, the action and interaction of the physical atom with the free Ether, we must consider the free Ether as acting upon the constituent etheric atoms, and not upon the physical atom as such. Let us take an illustration. A company or battalion of soldiers is composed of a certain number of units. In manœuvres, the companies and battalions are moved and combined as units. They may

be led into battle as such, but in the actual fighting it is not the company but the individual men who fight.

Consider for a moment an influx of energy from the etheric Plane such as we have in the etheric waves or undulations radiated out into space by the Sun, and some of which are known to us in the form of light. When this form of etheric activity reaches our Earth it acts upon the constituent etheric atoms of physical matter, and stimulates them into increased activity; and that increased *internal* activity is then manifested on the physical Plane as an increased *external* activity of the physical atoms and molecules. Our company of soldiers, considered as a company, will exhibit increased activity if every individual soldier quickens his pace to the double.

The increased activity of the physical atom shows itself among other things in that form of energy which we know as heat. The Sun's rays are themselves neither heat nor light; they are a form of electro-magnetic energy. When, however, they act upon the etheric atoms of which physical matter is built up, they produce various effects, some of which we call heat. In the tissues of plants, or on a photographic plate, they produce chemical changes; in the structure of the eye they give rise to the sensation of light.

Thus, although physical matter is in reality nothing but Ether, there is an enormous difficulty in forming any conception as to what the free Ether may be on its own Plane, simply because when we have got back to the Ether we have altogether dematerialised matter, we have stripped it of all those qualities which constitute it as physical matter, and we are left with something altogether intangible and immaterial. It is as if we were to endeavour to speculate on the nature and properties of a gas without any means of collecting it or confining it within a vessel, and with no knowledge of any properties of matter other than those of solids and liquids.

Perhaps it would be hardly correct to say that physical matter is absolutely dematerialised when it is resolved back into etheric atoms; for if the corpuscles which are discovered through the breaking up of the Radium atom are true etheric atoms—which, however, we are inclined to doubt—then it is at all events certain that they still possess the characteristic of mass or inertia, though not in the same way as the physical atom.

But there is every reason to believe that what we know as

the Ether—that is to say, that substance which we are able to recognise by reason of its action and interaction with physical matter—has some definite structure, atomic or otherwise. In other words, our knowledge of what we call Ether is not a knowledge of a structureless homogeneous substance, but of a highly differentiated one. From this we deduce that in what we know as Ether we have not yet reached the Plane of Primordial Substance.

Water appears to our physical senses to be absolutely structureless, and it also behaves in general on physical masses of matter as if it were so. It is only a closer analysis which reveals to us its molecular and atomic nature. In a similar manner the Ether, considered merely as a medium for the propagation of light waves or undulations—an idea which we borrow wholly from the behaviour of physical matter—might appear to be perfectly homogeneous and structureless. We are coming to a knowledge of certain phenomena, however, which no longer admit of such an hypothesis. The Ether must have some kind of structure.

It is highly probable that when our knowledge of the structure of the Ether is much further advanced, it will be recognised that what we now call the Ether is a highly differentiated form or mode of Substance which can in its turn be resolved into the Substance of a still higher Plane ; and it will be useful at this point to postulate at least two Cosmic Planes beyond the Etheric, although it will probably be a long time before inductive science can definitely experiment with even one such Plane.

There is, however, much in Philosophy and Religion which demands the existence of these higher Planes, and they may be treated in the meantime as subjective Planes of consciousness rather than as objective Planes of phenomena.

The Plane of Substance which lies immediately beyond the Etheric we may term the *Mental Plane*, and the Plane which lies beyond the Mental Plane we may term the *Spiritual Plane.*

A term which is often used for the Plane of consciousness next above the Physical is the *Astral.* The Astral and the Etheric may possibly be two really distinct Planes ; but as science is dealing experimentally with the Etheric, we shall confine ourselves to the use of that term for the Plane immediately above the Physical. Once the *principle* has been under-

stood, the details may be modified from time to time as new discoveries are made.

Beyond the Spiritual Plane is the Infinite, Boundless, Formless Ocean of undifferentiated Primordial Substance; which in Itself is neither Spirit nor Matter, neither Subject nor Object; for the contrast, the opposition, the polarity, the qualities by which either of these and all other pairs of opposites are known, disappear in that One Absolute which is the ALL.

If all physical analogies fail us in our endeavour to understand what may be the objective nature of Substance on the Plane next removed from the Physical, *i.e.*, the Etheric; how much more must they fail us in endeavouring to realise what that aspect of Substance must be on the Mental and Spiritual Planes, and what may be the particular forms of motion associated with consciousness on those higher or more interior modes of Substance.

Every remove from the physical Plane makes it more and more necessary to dematerialise our ideas and conceptions of all phenomena whatsoever. Neither considerations of mass nor of energy, of time or of space such as we are familiar with 'down here,' are valid in any sense on those higher Planes, which, at present, in our normal waking consciousness, are related to us in a purely subjective manner as "the all-embracing energy of thought," and as purely spiritual inspiration, intuition, or vision; as the instinct of a divine measure of life and consciousness which flows in, as it were, or wells up from the innermost depths of our nature only in rare and exalted moments.

The Spiritual Plane we may regard as the first differentiation in or of Primordial Substance, hardly distinguishable perhaps from Primordial Substance Itself—almost Absolute Motion, almost Absolute Consciousness. It is the first Plane of *limitation*, the first Plane of *form*.

In so far as Consciousness may be said to be individualised on this highest Plane, it is the Plane of the Gods, of the Logoi, of the "First Born." It is higher than the Plane of Mind, because it is the Plane of abstract Ideas rather than of concrete thought. Mind is essentially the formative, individualising, discriminating, particularising principle. Every 'thing' must be a thought before it is a 'thing'; it must be separated out by the operation of Mind—by limitation—from its essential

oneness with the ALL; it must become—in consciousness—a time and space phenomenon.

Possibly the Spiritual Plane may be thought of best as the Archetypal Plane, the Plane of Divine Ideation, the Plane on which exists the *Type* of everything which afterwards unfolds in time and space as the objective phenomenal universe.

We cannot too clearly realise that the whole cosmic process of evolution cannot be anything more than the unfolding of that which already exists, in an Archetypal form, on the highest Plane of the Cosmos; even as in the microcosm the tree already exists in the seed, or the man, with all his physically transmitted hereditary qualities, in the single germinal cell. The Archetypal Plane is the germ-cell of the Universe; it contains the *type*, the Divine Idea of the Universe which is to be.

We can have no possible conception as to any objective forms of Primordial Substance on this highest or Archetypal Plane, or even any form of motion—'undulatory' or otherwise. We cannot even say what may be the objective forms —as motion of Primordial Substance—of the *ideas* which certainly exist as some mode of motion in our own minds. We do not even know what may be the particular mode of motion which represents in a particular seed the particular tree which will evolve therefrom; or the particular mode of motion which exists in the particular germ-cell from which the particular man, and no other, will come forth.

From one particular Archetypal or Creative Idea, from one particular Logos—"the first begotten Son of the Father" —one particular Universe of all possible Universes eternally existing in the latency or potentiality of the Absolute, comes forth into manifestation. Our best analogy here is probably that of the germ-cell. There is no reason to suppose that the evolution or unfolding of a Cosmos is any different in principle from the evolution of a single individual; or that the evolution of the race or the species is other than a similar process of unfoldment: an "ordered change," which, by a higher Intelligence, is surely foreseen and predestined. The individual does but repeat or reflect the universal; and while the individual may vary within somewhat wide limits, he cannot vary outside the type, nor affect in any way the larger cosmic process.

We can have no possible conception of any *mechanical* Power which "in the beginning" can cause forms to arise in a homogeneous substance. Even Haeckel we find obliged to postulate will and desire in the primordial atoms, or "pyknatoms." The *idea* even of a primordial vortex-ring must exist before that form of motion can be manifested; it must be thought and willed before it can become an *objective* fact in consciousness.

But we find within ourselves a conscious living power which is continually seeking to express itself in action of an outward or material nature, and nothing is more natural or logical than that, failing any mechanical analogies, we should postulate as the *primum mobile* of all phenomena a subjective Power of which we certainly have warrant, knowledge, and analogy in our own nature.

On the physical Plane life is seen as a formative principle *organising* matter, but not originating it. The whole range of the vegetable and animal kingdoms, from the lowest forms to the highest, shows us the incomparable power of life to work in or through matter, and to mould it into forms of infinite variety, utility, and beauty. But if life thus organises matter *from within*, after it has reached the atomic or molecular state, why should it not be the organising principle of the atoms and molecules themselves?

Setting aside altogether the *supernatural* theory that life and consciousness belong to another order than that which we know as the *natural*, that matter is absolutely dead, and that therefore life must be something which can only act *upon* it: we can arrive at no other conclusion, from the phenomena with which we are familiar, than that life and consciousness are innate or inherent in Substance; in which case they must be operative in their proper nature on all the Planes of the Cosmos, from the highest to the lowest, and, therefore, in every atom as well as in every other objective thing.

Substance Itself IS the One Life, the Monad; and the whole Universe expresses the nature of that Monad, to which, indeed, many names have been given at various times, and which, as the Root of every individual Subject as well as every individual Object, can never be known or understood as either of these separately, but only when—knowing our own Self to be truly *One* with It—we learn thereby also the true nature of the illusive world of *matter*, which now appears

to be the Not-Self, a fleeting phantasmagoria of time and space.

We must regard the Cosmic Process, then, as an *unfolding*, an objectivisation in time and space of the Idea which exists eternally, together with that of all possible Universes, in that Infinite Incognisable Be-ness which we call the Absolute ; and, so far as our present universe is concerned, in an Archetypal form on the highest or Spiritual Plane, the Plane of the personal creative God or Gods, the Logos, the Heavenly Man, Jehovah, Brahman, or in whatever other name this conception may be embodied in any of the great religions or philosophical systems to which it is common.

It must be observed that even this first Plane, this primal manifestation of the Eternal Idea, is a *limitation* ; it is one possible Universe individualised out of all others.

Let us take a concrete example. An expert chess player can easily individualise in his own mind one particular game ; he can see that game as it were as one complete whole, from the opening move to the final mate. All possible games of chess really exist already, and a higher form of consciousness might even be conceived of as seeing all possible games simultaneously. An expert player can certainly individualise many complete games. He may or may not actually materialise any one particular game, he may or may not *evolve* it ' down here ' by playing it with material pieces ; but it certainly exists in his own mind, it exists as a definite ' thing ' on the Mental Plane. If he actually plays the game, then we shall have a process of evolution, an unfolding in time and space of that which already exists unrelated to time and space on the higher Plane. Even in playing a game of which he does not see the end, he makes a choice at each move of some one out of many possible moves clearly seen in his own mind.

Suppose a particular game of ' living chess ' to be played ; a game already known from beginning to end by the player who directs the movements of the living players. The players themselves see only the individual moves, see only the process of the game unfolding or evolving step by step. Each player is free to a certain extent in his own square, is free to do many actions without interfering with the course of the game. So also we as individuals are free within certain limits, but cannot step outside the predestined course of evolution, the unfolding of the divine purpose. We do many things, how-

ever, which will not in the slightest degree alter our fate or destiny in that respect.

We may regard the formation of every lower Plane as a repetition, *mutatis mutandis*, of the original process of creation or emanation. It is an individualisation by limitation. It is the particularising in the individual, or in many individuals, of particular aspects of that which on the highest Plane exists as ONE, as the universal, altogether outside of time and space. Time and space are modes of consciousness by means of which the universal is known and understood as the particular.

So far as the *objective* aspect of this particularising process is concerned, it appears to us in the first instance as a gradual formation of the great cosmic Planes of ' matter ' by a process of limitation or involution of motion, until we come down to the lowest or physical Plane, where Primordial Substance is seen under an aspect which wholly veils or obscures its inherent qualities both of motion and consciousness. Thus, so far as the *subjective* aspect of the process is concerned, we lose sight also of life and consciousness. In physical matter as such we are totally unable to recognise their action and influence. We only do so as soon as they produce certain definite *organisms*.

We have postulated four great Cosmic Planes, the descending order being : the Spiritual, the Mental, the Etheric, and the Physical. There are probably others besides these, but as our object is to systematise as little as possible, and rather to enforce and illustrate general principles, we believe that this can best be done by enumerating only those Planes for which we have definite warrant and actual analogies and experience.

It should be clearly apparent that these Planes are not separated by any sharp line of division. The ' matter ' of one Plane must be conceived of as shading off, as it were, by imperceptible degrees into the substance of the next higher Plane. So far as the physical and the etheric Planes are concerned we find the physical atom breaking up into corpuscles, which may or may not be true etheric atoms. But in any case we must necessarily think of these corpuscles as being of an exceedingly complex nature, possibly corresponding to ' solid ' matter on the etheric Plane. The matter of the etheric Plane we must again conceive of as resolvable into the substance of the mental Plane, into " mind stuff," and this again into that of the higher or spiritual Plane. Ultimately, and all the

time, 'matter'—on whatsoever Plane—is never anything else than Primordial Substance.

The physical and etheric Planes we have already sufficiently dealt with in our earlier chapters, and we must now turn our attention for a moment to the mental Plane.

Looked at from *above* the mental Plane must be regarded as a more definite individualisation of the purely ideal or Archetypal forms of the spiritual Plane. It is a further "descent into matter."

Suppose, for example, we take the Archetypal or divine Idea of Man. That Archetypal Man is neither one nor many individual men such as we at present know. 'Down here' we only see men, not Man; we only see men at certain stages of evolution, as part of a time process. But the divine Idea of Man, the Archetypal Man, the Divine Son, made "in the image of God," we cannot consider otherwise than as complete and perfect from "the beginning." All that humanity has been, is, and will be, is included in that one Archetypal Idea.

But on the next Plane, on the mental Plane, we may conceive of Man as individualised into men. It is the Plane where the Universal Self becomes individualised into those Selves or Egos which find a still more limited expression on the etheric and physical Planes as our own individual personalities.

The characteristic of the thinking conscious Self on its own Plane—the mental—will be an extension of consciousness almost inconceivable to our limited personal selves, and but rarely realised by the normal man. Nevertheless, there is ample evidence of the existence of this "cosmic consciousness" in every one of us, did we but know how to come into touch with it, to bring it through, as it were, to our physical state.

The more we study consciousness on its own lines, and not as a mere matter of physics and chemistry, the more we shall come to realise the inner latent powers which lie for the most part unsuspected in our nature. The more these are realised, the more necessary it becomes to distinguish between the various Planes to which these inner faculties belong, in order that we may form a consistent theory which shall be harmonious with, and form a natural extension of, all that science can teach us of natural law on the physical and etheric Planes.

Our physical bodies are ensouled by each of the higher Planes in turn. To the etheric we owe our physical vitality; to the mental we owe our conscious thinking individuality. The mental Plane may be regarded as that aspect and activity of Primordial Substance which we call thought. The etheric is life or vitality in a more physical sense. In the lower forms of life, the activity or vibrations of the mental Plane do not come through or manifest; the organism is not yet receptive enough for them. In the higher animals we begin to get mentality, and in Man mentality develops rapidly, and the vibrations from the higher or spiritual Plane also begin to come through.

Our physical bodies are the organisms or vehicles by means of which the individual Ego, whose real habitat is the mental Plane, comes into conscious relation with the physical Plane. Through the various sense organs the vibrations of the physical Plane are localised first of all in the brain cells, where, in their last *physical* analysis they are simply chemical and physical changes of matter.

But we now know that the problems of physics and chemistry are no longer mere questions of the combinations of, or available energy of, atoms considered as irreducible units having definite mass and extension. They are questions of the *internal* structure and nature of the atoms; they are questions, in their next remove, of the nature of the Ether.

We know also that every atom acts and reacts with the free Ether—with the etheric Plane proper—in every vibration which it makes; that every physical and chemical change in matter involves a corresponding change or motion on the etheric Plane. The Ether literally ensouls physical matter. Every physical phenomenon is absolutely dependent upon the existence and activity of the Ether.

When, therefore, physical and chemical changes take place in our brain cells as the result of a sensory nerve current transmitted from some one or other of our sense organs, there is a corresponding action on the etheric Plane through every individual atom of the cells which are concerned in that action.

The same principle applies when we consider the mental Plane, which is still more interior in relation to the atom. In its turn it ensouls the etheric Plane, and a corresponding

effect must be produced there by every single vibration or thrill of the physical atom.

Through all the Planes, however many there may be, the same principle must be true, right up to Primordial Substance Itself, which is the innermost of the inner as well as the outermost of the outer, and in which alone, in any true sense, we live and move and have our being, for It is the Soul of all souls, the ground and root of all phenomena.

Thus every physical action or phenomenon has its corresponding and *simultaneous* action on every Plane of the Cosmos. Not merely must this be so, but we are compelled to postulate also that on each interior Plane in succession it becomes more and more *universal*, so that on the Plane of Primordial Substance itself—which, however, is no *Plane*—it loses in absoluteness all time and space validity.

I strike a bell—the sound is ' heard ' instantaneously at the ' other end ' of the universe. On the physical Plane, that sound is merely an aerial vibration, propagated with a velocity of 1,090 feet per second. But the molecules of the bell, as well as the mass of the bell, are vibrating ; and these vibrations give rise to etheric vibrations which are probably propagated with the velocity of light, 185,000 miles per second ; so that the sound is ' heard,' on the etheric Plane, at the end of one second, 185,000 miles away. There are some people to whom these vibrations are actual vision.

On the next Plane—the mental—we shall have ' telepathic ' velocity ; and who shall say scientifically what that is ?

Must we not postulate that on the next—the spiritual Plane—this simultaneous action will *almost* have reached absoluteness, will practically have lost all time and space validity ? Will it not be, on that Plane, practically *everywhere* at one and the same moment ? We must carefully guard, however, against the supposition that this is so simply as a matter of accelerated velocity. No number of mere multiplications will reach absoluteness. These accelerations only give us *physical analogies*—consciousness itself is above and beyond these.

" You say a thing cannot act where it is not," says Carlyle ; " with all my heart—only, where is it ? "

But the physical Plane is not the Plane of *causes* ; nothing ever originates there. If we trace back any sequence of

cause and effect far enough, we must inevitably trace it to some form of energy emanating from a higher Plane. This of course is necessarily so from our very conception and definition of Primordial Substance. All phenomena are never anything else in reality than phenomena of Primordial Substance. They only 'become' phenomena of a lower Plane when regarded in a limited manner by a limited form or mode of consciousness.

But the atoms of physical matter as such—whether in brain cells or not—do not merely *transmit* to the etheric Plane, and through the etheric to the higher Planes, some equivalent form of motion representative of the motions which they experience as atoms; they also *receive* impulses or vibrations from the higher Planes.

We have dealt with the physical aspect of this action and interaction in Chapter V.; what we must note here is, that the same principles which apply to the physical action and interaction of matter with the Ether, apply also to the action and interaction of the Ether with the substance of the mental Plane which lies beyond it. Thought is a definite form of energy on its own Plane; it becomes energy of another form on the etheric Plane; and, finally, on the physical Plane it is able to energise in living organisms when a special apparatus has been evolved for that purpose.

There are probably infinite forms of motion or energy on the etheric Plane which can find no response in physical matter; we certainly know that there are innumerable forms which find no response in our consciousness, as we have no senses to appreciate them. We have no magnetic sense, no sense of the nature of gravity. Our sense of that form of etheric activity which we call *light* is very limited. We know that rays exist below the red and above the violet end of the colour spectrum, which, however, we have no means of sensing, and which, if we had, would make the universe appear a very different place to what it does now.

The same principle must apply to the activities of the mental Plane. All that we receive from that Plane will be limited and conditioned, first of all by the nature of etheric matter, and then still further by the inertia of the physical atoms of which our bodies are built up. We must consider this, however, in a subsequent chapter on the nature of the individual Ego.

In our earlier chapters, in dealing with physical and etheric modes of motion, we have seen that the Ether has an enormously increased activity as compared with physical matter. The internal activity of the physical atom—which is really etheric activity—is almost inconceivable. In the phenomena of light, and other electric or electro-magnetic activities, we have similarly to deal with magnitudes and velocities incomparably greater than anything which can be seen or understood in mere mass movements of physical matter.

What, then, must be the nature of the activities of Substance on the still higher mental Plane? Thought practically transcends all limitations. We can only understand partially what the power of thought may be on its own Plane, because all that we know of it in our normal waking consciousness is hampered by the limitations of the etheric and physical Planes. In certain abnormal states of consciousness, however, the Ego rises above these limitations, and the real nature of the Self on this higher Plane is more nearly understood.

According to the parallelism which we have established between motion of Primordial Substance considered as *object*, or 'matter,' and the same motion considered as *subject*, or consciousness, we see that this larger consciousness on the higher Planes falls naturally into place with all physical analogies. So far as our individual consciousness is concerned, however, it is a *return* to the universal. Motion—whether considered objectively or subjectively—is universal before it becomes particularised on the various Planes in descending order. If, therefore, we consider it from the subjective point of view as consciousness, the forms of consciousness associated with the formation of the 'matter' of the various Planes must be of a *cosmic* nature, rather than anything which we can think of as individual in our understanding of the term.

The formation of 'matter' on any Plane will precede the evolution of individual forms of consciousness, of that which on the physical Plane we term 'organic life.' The evolution of the physical Plane as a whole, and of the Worlds and Systems on that Plane, is certainly a cosmic process, and as such will be associated with what we call—from the objective standpoint—natural forces: but which, from the subjective standpoint, will be the activity of cosmic forms of life, Conscious

Intelligences altogether beyond the reach of our present limited consciousness.

Cosmic *bodies* are the expression of cosmic forms of Life and Consciousness. Cosmic *forces* are the activities of Cosmic Intelligences.

Let us take an analogy from our own physical organism. Every cell in our bodies, every molecule and atom—even according to Haeckel—is a conscious unit, and possesses in some degree a *soul*. But the forces which play upon the individual *lives* of which our bodies are built up are determined by that larger consciousness, that larger unit of life which we call *ourselves*. I experience, for example, a strong emotion, and my whole body feels the influence. Subtle nerve currents are set in motion in all the nerve centres, the action of the heart is accelerated, and the blood flows faster through the whole system. The mere physical fact involves some kind of action, influence, change, in countless billions of *lives*. A blood corpuscle may be conceived of as aware in its own dim way that it is being hurried along with greater speed; and, so far as it is conscious of its environment, it would doubtless attribute the *cause* to something taking place in that immediate environment. But what can that corpuscle know of that larger consciousness which I call *myself*, of the activity, thought, emotion of that larger consciousness which stands in the relation of a *cosmic* consciousness to all the lesser lives of which the physical body—a veritable cosmos in itself—is built up? What can those lesser lives know of the *emotion* which I experience, of the affairs which occupy my larger consciousness: which only descends to consider that of the lesser *lives* when these latter cause me a certain amount of inconvenience or pain, which may possibly be their 'prayer' to me to do something for them.

Thus the emotion which I experience, which may arise in connection with a purely abstract thought, is the *cause* of many physical and chemical changes in the cosmos of my body. Every thought is a force influencing the body to some extent, and the dominant thoughts of a man will certainly mould his body to their own expression, will attract and build up the matter which most readily responds to their own particular mode of motion, until perhaps the man finds himself the slave instead of the master of his own body.

In the inorganic world, the activity of every atom of

matter is dependent at every moment upon great cosmic forces flowing in from the higher Planes; and these cosmic forces are the *life aspect*, the activity, of Cosmic Intelligences, Hierarchies of "Creators," each focusing, as it were, some special aspect of that Divine Thought of the Universe in which that which appears to us as past, present, and future is One Complete Whole.

Strictly speaking, nothing can ever be 'created'; it can only be brought out of subjectivity into objectivity by a process of limitation in time and space; which latter are not actualities, but modes of consciousness. This must be true whether we apply it to our own powers of materialising ideas and thoughts, or to those greater Cosmic Powers by and through which *Nature* works. The whole evolution of Man—Humanity—is determined by Cosmic Intelligences; but each individual man is largely the expression—in any particular body—of an individual *self*, determined by innumerable individual past experiences, actions, desires. "Each man his prison makes."

Everything which we consciously fashion out of matter on this Plane, and very much which we also unconsciously fashion, must first of all exist as a *thought* in our mind. The work of art which the artist 'creates,' the design which the craftsman elaborates, the commonest article which is ever fashioned of physical matter, must exist first of all in the mind of the individual who fashions it.

But it is not 'created' even in that mind, it is only individualised there. Just as the individual atom of matter is, by reason of its inner nature, receptive of etheric activities, so the individual mind—which we must consider to be a unit or *monad* on the mental Plane—is, by its inner nature, receptive of the Ideas, the Types of all possible things existing on the still higher Spiritual or Archetypal Plane. The individual mind is, as it were, the lens by which these Divine Ideas which exist eternally in the latency of the Absolute, or the potentiality of the Logos, are focused on the screen of time and space.

Perhaps a physical analogy may help us to some extent to grasp this idea. In any fully lighted room every object is clearly visible at whatever point in the space of the room we may place our eye. Or we may prick a pin-hole in a card, and placing our eye to the hole we find that we can see a certain portion of the room, no matter where we hold the

card. This means of course that the rays of light from all the objects seen through the pin-hole must simultaneously pass through that hole, and, therefore, we may say that every object seen is represented by a certain order of etheric activity in the space of the hole. But since, no matter where we place the hole in the space of the room, we obtain a picture of the room, it follows that every object in the room is represented by a certain order of etheric activity at every point of space in the room. All these light waves cross and recross each other, the Ether vibrating with inconceivable rapidity, yet the picture of every object at every point of space is clear and distinct.

In a certain sense, then, every object actually exists—on the etheric Plane—at every point in the space of the room, and by allowing the rays which pass through the pin-hole to impinge on a photographic film we can again *materialise* the object in the form of a photographic picture. We have brought into objectivity in a special individualised form something which exists on another plane at every point of space in the room.

Conceive, then, of the Divine Idea of all that is the objective Universe, existing eternally and everywhere in Infinite Space, as some—to us utterly inconceivable—mode of Primordial Substance. Conceive of every individual unit of consciousness, on whatsoever Plane—whether that individual unit or monad be that of a God or an atom—as being something which is able, as it were, to gather up and focus some particular aspect of that Divine Idea which, existing everywhere and at all times, has in itself no relation whatsoever to time and space. By this analogy we may possibly form some faint conception of the fundamental principle that all things whatsoever which appear in time and space exist eternally and everywhere on the highest Plane of Primordial Substance.

But they certainly do not exist as the ' things ' which we see, or of which we are conscious down here. These ' things ' are only limited and individualised aspects—more and more limited and individualised as we descend from Plane to Plane—of a *Reality* which exists eternally in the One Infinite Divine Life and Consciousness.

To come more and more into conscious relation with that Infinite Power, by realising more and more that it is even that Power Itself which is our own life and consciousness, our inner

and real Self—is to accomplish our own individual evolutionary course and destiny.

To recapitulate, then, we may conceive of the Divine Idea of the Cosmos as individualised, reflected, or focused, as it were, first of all as one complete Whole in the Consciousness of that Power, by whatever name It (or He) may be called, who is "the image of the invisible God, the first born of all creation."

We may conceive of a further individualisation of certain aspects of the full complete Divine Idea, a breaking-up of the one Ray into many: these further individualised forms of consciousness being great Cosmic Powers by and through whom 'matter' of the various Planes of the Cosmos is formed, energised, and sustained, and the Cosmic Bodies, the Suns and Worlds, come into existence: not by a creative act, but as the natural *objective* expression of the active Idea.

On every Plane in descending order, Consciousness will express itself in more and more individualised forms; the 'matter' which is the cosmic body or objective aspect of the great Cosmic Powers, becoming on each Plane a more and more limited field for the evolution of individualised forms of consciousness. Considered as separate independent units, every physical atom presents an individual aspect in which both motion and consciousness reach the furthest point of *involution*. Matter considered simply in its two most obvious or common qualities of mass and extension, does not present to our perceptions any qualities of life or consciousness. It is apparently only moved by external forces; its motion appears to be merely mechanical.

The distinction between merely mechanical motion and that of *life* is essentially that in the one case the object is moved only by *external* forces, is only acted *upon*, and is not itself the actor; whilst in the other case motion is innate and spontaneous, it comes from *within*. But every advance made by science into the microcosm of the atom shows us that the more we penetrate into that inner world the more it opens out into the macrocosm of the Infinite; the more we study it, the more we find that it is "not dead, and only moved by extrinsic force," but that it is the expression of an active living Power.

Every atom exists on, and acts and reacts with, every Plane of the Cosmos, simply because in its successive stages of formation it *involves* the 'matter' of each successive Plane. Even if we materialise our ideas of this process to such an extent as

to imagine that there is some form of simple vortex-ring, in three-dimensional space, which is the first form or differentiation of Primordial Substance, and that the ' matter ' of the lower Planes is formed by successive aggregations or combinations of these simple rings : we see that these primordial rings, however much they become involved in the matter of lower Planes, always belong in reality to the higher Plane, and as such must act and react on that Plane in their own distinctive manner, which would certainly be something quite other than we are familiar with in physics or chemistry. Regarded in their objective aspect, each would have almost absolute motion, since they are only one remove from Primordial Substance Itself. For the same reason, regarded in their consciousness aspect, we should have to think of them as some kind of metaphysical centre of consciousness, like Leibnitz's Monads, so near to absoluteness as to be practically indistinguishable therefrom, each Monad reflecting the whole Cosmos.

Even physically we know that every atom of matter is bound to every other atom, that it attracts every other atom by that mysterious power which we call gravitation. On the outer Plane of perception ' things ' appear to be separate, individualised, independent. But that is appearance only. Every single thing, however small or however large, has invisible but actual bonds which unite it with the whole Universe. Only as we see it in that larger relation and proportion can we come to an understanding of what it really *is*. Any knowledge less than a knowledge of its relation to the Whole is comparative darkness, limitation, error, and illusion.

Our fundamental principle of the unity of the Universe necessarily implies this relation of every individual thing to the Whole : implies that there is nothing discrete, disconnected, isolated, in the whole Universe. There are no gaps ; there is no natural *and* supernatural, no spirit *and* matter. The Universe is the " garment of God " ; it is " without seam, woven from the top throughout."

If, then, we fail to recognise the life principle working in physical matter, it is because we have as yet only learnt to associate life with individual forms, because we see only the outer form and expression, and not the inner energising power and activity. We thus fail to realise that the whole Universe being the expression of the One Life, there must be infinite forms of life on other Planes, absolutely unknown to us ; Cosmic

Forms of Life and Consciousness by and through which that which we call *Nature* ceaselessly manifests the One Divine activity.

Until we can understand this, indeed, we have little chance of realising our own inherent divine nature. Religion has dogmatised more or less clearly as to what we shall be ; science is beginning to teach us what we *are.*

Let us learn, then, to think cosmically, and even altogether outside of time and space. Only as we learn to do this can we escape from the provincialism of conventional systems, and the limitations of mere outward appearances, and penetrate into that inmost sanctuary " where Truth abides in fulness."

CHAPTER XII

ORGANIC EVOLUTION

"A monstrous eft was of old the Lord and Master of Earth,
For him did his high Sun flame, and his river billowing ran,
And he felt himself in his force to be nature's crowning race.
As nine months go to the shaping an infant ripe for its birth,
So many a million of ages have gone to the making of man:
He now is first, but is he the last? is he not too base?"

TENNYSON, *Maud.*

CHAPTER XII

ORGANIC EVOLUTION

THE general principle of evolution as applied to the Cosmos and to Man is to be found in many philosophies dating back to the very remotest times.

But during the last century it reappeared in a special form, in the efforts which were made by various scientific investigators to trace a definite line of descent of the more highly evolved species of animals, man included, from earlier and more primitive types, back even to the most rudimentary forms of life, back even to the very beginnings of life on this globe.

The modern theory of organic evolution probably had its rise and principal incentive in the early part of last century in the science of geology, which was then just beginning to be understood.

The evidence of the fossil remains found in the various, geological strata conclusively shows a progressive series of vegetable and animal forms. In the oldest fossil-bearing strata evidences are found of the existence only of the simplest or most rudimentary forms of life ; in what is known as the secondary or mesozoic strata we come upon the fossil remains of more highly developed species, fishes and reptiles ; while the mammals are only to be found in the more recent or tertiary strata.

Whilst, however, the basis and groundwork of a general conception of continuity and development was thus found in geology and paleontology, it needed something much more definite to place the principle on a firm scientific foundation, the more particularly so as the ground had so long been occupied by the old ideas of catastrophic and creational forces and interferences ; and, from the time when geology first began to be a science, the heaviest artillery which religion—so-called—possessed had been brought to bear

against the theories as to the age and development of the Earth, which were gradually becoming necessities of scientific thought during the early part of last century.

At the present day, when much which was beyond the wildest speculation of that time has become commonplace matter of fact, it is difficult to realise from what a night of ignorance, prejudice, and superstition we have so recently emerged.

What was more particularly needed at that time, however, to place the evolutionary theory on a firm basis, was some definite conception and evidence as to the possible factors which may have been operative in the gradual development and evolution of the innumerable forms of organic life, and this was furnished in 1859 by the epoch-making work of Charles Darwin on the *Origin of Species*.

Darwin's work was the result of twenty years of close observation and experiment, and the theory which he then advanced, and which has played such a prominent part in scientific thought during the last fifty years, was briefly as follows.

The natural conditions of life are such that there is a constant struggle for existence, and in the struggle those who are not sufficiently well equipped, or who are not sufficiently in harmony with their environment, will be placed at a disadvantage in comparison with those who are. Where there is not enough food for all, the strongest, or the fleetest, or the most cunning will have a decided advantage, and will thus live longer, and propagate their species better, than the weaker and less endowed members of the community, who will be killed off more quickly. But since the qualities of the parents are transmitted to their offspring, the strength, fleetness, or other qualities of those who are best fitted for the struggle for existence will be handed on, and will continually tend towards betterment; or towards a more perfect correspondence with environment, adaptation to new or changed conditions; or, in general, fitness to survive.

The principal factor in the evolutionary process was named by Darwin "natural selection," but it is perhaps better understood under the term given to it by Herbert Spencer, and afterwards adopted by Darwin himself, that of "survival of the fittest."

We should carefully note that the term "fittest" applies

in this connection merely to environment, and does not mean fitness in any moral sense. It does not even necessarily mean betterment in the sense of new or increased powers. It may even imply retrogression, and it is well known that many species have retrograded, whilst others have remained practically unchanged for untold ages. Where food is plentiful, and there are few or no enemies to avoid, there is no particular natural incentive to an increase of structural or organic powers or faculties. Under such conditions, indeed, a particular organism may tend to degrade to a merely parasitic form of life.

Nevertheless, the fundamental conception of evolution is that of progress, betterment, the acquisition of new and increased powers and faculties; and we have the fact before us that, in the main, natural selection, or the survival of the fittest, does tend to bring this about, and to produce higher and more perfectly organised forms of life. Darwin says:—

"Natural selection is daily and hourly scrutinising, throughout the world, the slightest variations; rejecting those that are bad, and adding up all that are good; silently and insensibly working, whenever and wherever opportunity offers, at the improvement of each organic being in relation to its organic and inorganic conditions of life."

It is of profound significance that this perpetual struggle for existence which we call *evil*, is one of the main factors in the production of what we recognise as *good*, in the production of a higher and still higher type, both of animals and of man himself.

The publication of Darwin's work was the signal for such an exhibition of the *odium theologicum* as had scarcely ever been witnessed before. For forty years the controversy raged, and if it is closed to-day, and the doctrine of evolution has won all along the line, it is no thanks to those teachers and leaders who should be the foremost to welcome truth and revelation from whatever direction they may come. The attitude of the Church in this matter was, and still is, the direct cause of the most pronounced forms of atheism and materialism, as well as of a still larger and more insidious crop of negation and indifference.

The general principle of evolution as applicable to man is now an established truth. No one at all acquainted with the facts of the case, and the evidence which is now available, is

inclined to dispute that man as we know him to-day is the product of incalculable ages of evolution. There is really no question as to the existence of the *process*; the whole question is as to the *causes* which lie at the root of the process, and the results for the individual or the race which will finally be achieved thereby.

But although the general principle has been firmly established, the actual steps in the line of descent—or rather of ascent—are very far from being known. Even the most recent stages, and the question of the exact relation of man to the anthropoid apes, is one which is shrouded in obscurity, and respecting which the most diverse views are held.

Nor is it by any means clear that all the mere physical factors which have been operative even in the most recent stages in the evolution of the various species, and of man in particular, have as yet been discovered or are discoverable by biological science as at present understood: any more than the genesis of the various chemical elements is discoverable without going much further back than mere physical matter and energy. All these questions inevitably resolve themselves first of all into questions as to the action and interaction of the physical Plane with the next higher or etheric; and, ultimately, into purely metaphysical and philosophical questions as to the nature of Primordial Substance.

The modern theory of organic evolution, however, does not go beyond physical facts; it is essentially materialistic, and seeks to account for the process on purely physical lines. It seeks to trace an actual physical and historical continuity from one species to another, from the lowest forms of life up to the very highest; and it seeks for the *factors* which are operative in this process in external and mechanical conditions, rather than in internal determining causes.

The reaction from the old creational and supernatural theories has led to the work of Darwin and other evolutionists being pressed in the opposite direction for far more than they are worth. It has led very largely to an obscuration of the deeper philosophical issues involved, not merely in the question as to the nature of life itself, but also as to the meaning and significance of evolution considered from the larger point of view of life and consciousness.

In the first flush of the recognition of the enormous

advance made by Darwin, and the enunciation of what is certainly an important factor in the evolutionary process, it was assumed that this principle covered far more than has subsequently been found to be the case; and some biologists now even assign to the whole Darwinian theory a very subordinate place. Darwin's theory of heredity or *pangenesis* is now quite obsolete. He also took for granted the fact of *variation*, and made no effort to explain it. Variation, however, or the fact that heredity is not absolute in its action, but that the progeny of any particular individual exhibit slight divergences, is one of the most important factors in the evolutionary process; and one which, as we shall presently see, stands most in need of explanation. It is evident that if there were no such thing as variation, nature would have nothing to *select* from.

In general, the theory of natural selection was in the first instance regarded too much as the *cause* of evolution, whereas at most it is only part of the *process*. The principle of evolution, however, does not rest upon Darwin's work or theories; nor does it stand or fall with the principle of natural selection.

The terms *nature* and *natural* are used by many scientists, both biologists and physicists, as if they completely ruled out of court all questions of forces other than those with which we are at present familiar; all questions of intelligences in the Cosmos higher than that of man himself as we know him to-day; or the operation of anything but a purely mechanical sequence of cause and effect.

This is doubtless a survival, or rather a direct result, of the arbitrary distinction which has so long prevailed between the natural and the supernatural. Science rightly rejects all supernatural agencies, but unfortunately in doing so has gone to the other extreme, and rejected also all super-physical Intelligences.

Agencies operating upon matter from the etheric Plane are not supernatural agencies; but why such agencies should not be conscious Intelligences, quite as able to control the course of nature by means of nature's own laws as man himself, it is difficult to see.

Pure inductive science necessarily deals only with phenomena, with that which can be demonstrated to the senses; and, finding in phenomena an inevitable sequence

of cause and effect, it rightly and inevitably postulates that cause and effect rule throughout the whole of *nature*: including now in that term the invisible as well as the visible.

But in doing this, science has brought about a singular reversal of the natural order of things, for it has placed the plane of causes at the wrong end of nature, *i.e.*, in physical matter and force; whereas the whole totality of the physical universe is only a derived phenomenon—it is that which is caused, not that which causes.

This singular reversal of the natural order doubtless arises to a large extent from the fact that science has for so long a time regarded physical matter, the physical atom, as an indestructible entity. Cause must lie in the permanent, not in the impermanent; but now that the physical atom has been resolved into something else, we must seek for *causes* on a higher Plane.

The phenomenon of Radium has compelled physicists to fall back upon the etheric Plane as the Plane of *cause* for all physical phenomena; but biologists have not yet learnt to do so in the case of life and consciousness: the forces which are conceived to be operative in the evolution of life on this globe being, in the organism itself, purely physical and chemical; and, outside the organism, in the environment, the blind operation of unintelligent 'natural forces.'

This singular reversal of the planes of cause and effect is nowhere more clearly in evidence than in the attempt to show life and consciousness as *effects* of physical forces, instead of the *causes* thereof. What we need to recognise fully in this matter is, that so far as the *organism* through which life manifests on the physical Plane in concerned, that organism must necessarily conform, or be subject to the laws of cause and effect which are operative on that Plane; but the real cause of organic evolution must just as certainly be referred to a higher Plane, as must the real cause of the evolution of the chemical elements.

The lowest forms of organic life have no power whatever which comes within our cognisance to modify their environment by a conscious act of choice; and, therefore, to influence their own growth. As we rise in the scale, however, we find *instinct* coming in, causing the organism to avoid some things and acquire others necessary for its well-being. When we come to man himself we find a self-conscious power developed

which can not merely make an extensive choice of external conditions, but can very largely modify those conditions, and can direct the growth and evolution of species of plants and animals in certain directions which *nature*, left to herself, would probably never have designed—as, for example, all the fancy varieties of plants and domestic animals—and can largely control *natural forces*, and adapt them to the needs of the individual or the race.

Now in doing this no one supposes for a moment that man does anything which is supernatural, or does anything else than work *with* nature by means of her own laws. He may alter a *natural* sequence of cause and effect, *i.e.*, the sequence which would have taken place had he not interfered; but in doing this he does not alter a single natural law, he does not break up any sequence of cause and effect, or introduce any new order of things. On the physical Plane there will still be traceable a definite order or sequence of cause and effect, though not the sequence which would have resulted had nature been left to herself.

Thus on the physical Plane, in that sensible region to which scientists confine their observations, there is always a definite sequence of *events*, of one event operating apparently as the *cause* of the next; and this whether "the course of nature" is or is not interfered with by any guiding or directing power of lesser or greater degree than that which we know and possess within ourselves — the power of life, thought, consciousness.

Why then should some deny that there can be any such thing as an intelligent guiding power in the evolution of the race, on the ground that the introduction of such a power must be supernatural? It may be as *natural* on the larger cosmic scale as our own intelligence is in directing on a small scale the evolution of new varieties of plants or animals.

But what is usually lost sight of is, that this evident and visible sequence of cause and effect in *events* is only a surface appearance, is only a horizontal line which, be it extended ever so far, can never give us a *prime cause*, a Noumenon for all phenomena. We must look in another direction for this Noumenon, in that direction which we have previously termed the vertical line of direct connection with the Noumenon. It is the line which goes *inwards*.

Let us take a concrete example as applied to biology. The

egg of a bird requires a certain amount of heat applied for a certain length of time in order to hatch it. The heat may be supplied by the mother bird, or it may be purely artificial heat applied in an incubator. At the end of a certain time a bird of a certain species is hatched out.

Now what was the cause of the bird being hatched? At first hand we should of course say, the heat applied to the egg. In so far as the bird could not have been hatched without that heat we are of course quite right. Yet the reply is obviously a very superficial one, for it deals only with what we might call the accident of the environment.

If we ask why heat should cause the bird to hatch, or why that particular bird should appear, and not one of another species, we have not merely to state some of the other causes which are at work in the matter, but we have to look for those causes in another direction altogether; we have to look for them in the inner nature of that force which we call heat, and also in the inner nature of the egg itself, in the inner nature of that single germ-cell from which the bird really originates, and which—so far as anything which we can detect is concerned—cannot be distinguished from the germ-cell of thousands of other species of birds.

Now, if we ask a modern biologist what are the causes or factors which are operative in the evolution of species, and of man in particular, from the simplest protozoa, or the most elementary form of living matter of which we have any knowledge, *i.e.*, protoplasm, he replies: natural selection, sexual selection, heredity, and variation.

Natural selection, or survival of the fittest, in so far as it is simply the pressure of external circumstances, belongs to our horizontal line of cause and effect, to the accident of environment.

Sexual selection involves the consideration of the somewhat complicated factors which induce the males or females of any particular species, man included, to prefer certain types of form or character rather than others. Its influence in the animal kingdom is shown in a large variety of attractive features which the male usually possesses: the mane of the lion, the magnificent plumage which many cock-birds assume, such as the tail of the peacock, or in some characteristic sound which the male can make, such as the crow of the cock, or the song of the lark. There are, however, many other factors

besides mere attractiveness included under the general term 'sexual selection,' and biologists are by no means agreed as to the importance or operation of these factors. The matter is of course very much more complicated when we come to consider the case of man; yet even here certain broad lines of action have been observed.

We are not concerned now, however, with an analysis of these, but only to point out that this factor taken as a whole must be classed with that of natural selection as belonging to the external sequence of cause and effect.

But the other two factors which modern biologists allow us—those of variation and heredity—lead us directly into the region of *inner* causes, for they lead us immediately into an inquiry as to the nature of that mysterious *germ-cell* in which every physical form of life commences its individual existence on this Plane.

"Man is developed from an ovule, about 125th of an inch in diameter, which differs in no respect from the ovules of other animals. The embryo itself at a very early period can hardly be distinguished from that of other members of the vertebrate kingdom" (Darwin, *Descen of Man*, chap. i.).

"The human ovum, like that of all other animals, is a single cell, and this tiny globular egg-cell (about the 120th of an inch in diameter) has just the same characteristic appearance as that of all other viviparous organisms" (Haeckel, *Riddle*, p. 22).

What, then, is the *internal* difference in this minute individual cell, barely visible to the naked eye, but which inevitably develops into an animal of a certain species: a dog, a calf, a monkey, or a man, according to the species from which it proceeds; and not merely so, but faithfully reproduces certain characteristic features of its parents or more remote ancestors?

The origin of the earliest primordial forms of life on this Earth—or, as it is so often erroneously termed, "the origin of life"—is buried in the impenetrable past of untold millions of years. Nevertheless, there can be little doubt as to what these primordial forms were like, for we have them with us to-day; and—most significant fact of all—every individual form of life to-day must commence its life-history in some such simple organism—in a single cell.

If there is any difficulty in believing that the physical form of man can have evolved throughout countless ages from

the very lowest forms of life—represented to-day by the single unicellular protozoa, such as the infusoria—we have this undeniable fact before us, that *he does so to-day*.

But the science of embryology teaches us much more than that single fact. It shows us in the development of the human embryo a number of successive stages of evolution which are a ***recapitulation*** of the successive stages which man has taken in that long upward journey from the primordial protozoa.

It is not difficult to trace the main outline of this evolutionary development. The single germinal cell grows and divides into two, four, eight, sixteen, thirty-two similar cells; this stage being called the *morula* stage; and it corresponds generally to the lower forms of life known as the multicellular protozoa or metazoa. A little later the inner cells of this *morula*—or mulberry-like mass—liquefy, the outer cells condense into two membranes, and the embryo now resembles some of the lower forms of aquatic life. Presently there is a marked change; a little rod of tissue forms, indicating the line which will presently be the spinal column, and the embryo now resembles some of those forms of life, such as the amphioxus or lancelet, which lie at the very commencement of the vertebrate kingdom, the animals with a backbone.

The next stage resembles that of the vertebrate fishes, and this stage is particularly marked by the development of the arteries and circulatory system in general, which closely resembles that of fishes. Moreover, there are well-marked grooves on the side of the neck of the embryo corresponding to the gills of fishes.

> "The gill-clefts appear on either side of the fore-gut; they are the openings of the gullet, through which, in our primitive fish-ancestors, the water which had entered at the mouth for breathing purposes made its exit at the sides of the head. By a tenaceous heredity these gill-clefts, which have no meaning except for our fish-like aquatic ancestors, are still preserved in the embryo of man and all other vertebrates. They disappear after a time" (Haeckel, *Riddle*, p. 23).

Passing through stages more or less clearly representative of the amphibia and other reptiles—stages in which the characteristics are not preserved, but, like the gill-clefts, subsequently disappear, and are, therefore, clearly only intermediate—the embryo begins to assume the characteristic form of a mammal, and that of the higher vertebrate

species. The arms and legs in the first stages of their development are produced in the same manner as the fins of fishes, the feet of reptiles and mammals, and the wings and feet of birds: showing clearly that all these variations have some common origin.

The human embryo at a certain stage has a true tail, extending considerably beyond the rudimentary legs: showing that man's ancestors at some time or another certainly had tails. In the later stages the human embryo is hardly to be distinguished from that of an ape. "It is quite in the later stages of development," says Huxley, "that the young human being presents marked differences from the young ape." The convolutions of the brain in a human fœtus at the end of seven months reach about the same stage of development as in a baboon when adult.

But man does not altogether throw off the traces of his descent when he becomes adult. There are certain 'rudimentary organs' which are of no service to him, and are even very detrimental, but which still survive as remnants from his remote ancestors.

One of the best known of these is the *vermiform appendix*, which is a blind pouch attached to a portion of the alimentary canal, and is a remnant derived from some lower mammalian ancestor of herbivorous habits. Some thousands of operations are performed every year for the relief of inflammation caused by food lodging in this pouch. In the orang this appendage is long and convolute.

Man possesses the decided rudiments of a tail; he has various muscles by which a twitching of the skin can be produced, not necessary for him, but quite necessary for lower animals. Cases are known in which these rudimentary muscles can be used for drawing back the ears.

Darwin says: "The ears of the chimpanzee and orang are curiously like those of man, and I am assured by the keepers in the Zoological Gardens that these animals never move or erect them; so that they are in an equally rudimentary condition, as far as function is concerned, as in man." There are many other rudimentary characteristics too numerous to mention here.

We see, then, that in the development of the human embryo from the simple germinal cell, representative of the lowest and earliest appearance of what we know as *life* on this Globe,

nature *recapitulates* in a very short space of time an evolutionary process, each stage of which, in its primary inception, must have taken incalculable ages to accomplish.

Let us suppose that the period required is one hundred million years, as commonly demanded by biologists. The human embryo requires only nine months to recapitulate the evolutionary process, and the ratio of this to one hundred million years is as 1 to 133,000,000. In other words, nature now produces each individual human being in one 133,000,000th part of the time which has been taken to evolve the human race. Even if we add to this the post-natal period required to reach adultship—say twenty years in all—the time is still only one 5,000,000th of that expended in the evolution of the race up to its present point.

Now it is characteristic of all that we know of natural processes, or of our own capabilities and powers, that what has been done once can be done more easily a second time, and what has been done a million times, or a practically infinite number of times, can be done with infinitely greater facility than for the first time. Nowhere is this more clearly or more beautifully illustrated than in the pre-natal—or, indeed, we might also add, in the post-natal—life of the human being. In our growth and development from childhood to maturity, every faculty we possess, everything which we now do so easily and even unconsciously, is the result of ages and ages of past effort, in which by slow and imperceptible stages the *faculty* has been acquired by the organism. Do not forget, however, that faculty *precedes* organism. The organism is only the expression of the faculty. Does any one really imagine that the *faculty* of sight can reside in dead atoms and molecules?

But the question immediately arises: in what does this experience or faculty inhere; what preserves it and hands it on, through countless generations, and from one form of her?

Observe that there is an actual physical continuity stretching back to the remotest past for every individual existing to-day. All forms of life with which we are familiar at the present time, from protoplasm to man himself, are derived from previous forms of life. *Omne vivum ex vivo.* The individual commences his existence as a single germ-cell, but that germ-cell is derived from the parents, who in their turn

must trace their individual life back to a single cell derived from others; and so back, and still further back, from the human to the animal kingdom; and back and back again, through all those stages in the evolution of the race which are now outlined for us in the pre-natal development of the embryo.

What, then, is it in that mysterious germ-cell which not merely reproduces the more proximate characteristics of our immediate ancestors, but which also contains the epitome of all those countless stages of evolution which have gone to the making of each individual what he is to-day?

It is by no means our intention here to enter into the mighty controversy which has raged, and which still rages round this question among the representatives of the modern science of biology. Nevertheless, and in order to understand its philosophical import, and as a preliminary step towards a wider and deeper view than has yet been reached by modern biology, we must endeavour to outline briefly the principal theories.

The biology of to-day, like everything else which forms part of what is now known as *science*, attempts to explain the development of the germ-cell on purely physical lines; it attempts to state all physiological processes in terms of physics and chemistry. Now we cannot too clearly realise that whatever may be behind the mere physical mechanism of life, that mechanism, *in so far as it is physical*, must conform to the physical laws of matter and energy. Life processes are necessarily physical and chemical processes *on the physical Plane*.

But when we have taken the mechanism to pieces, down to the very last atom, what shall we have discovered of *life* or *consciousness*? Shall we even have discovered what form of energy it is which makes the mechanism work, any more than a man ignorant of the power of steam could discover the motive-power of a steam engine by taking it to pieces; or than we can discover the real motive-power of a watch by the same process? We get back to the main-spring: but what gives that spring its elasticity? In each and every case we find ourselves face to face with the inquiry as to the inner nature of the mighty atom itself: an inquiry which immediately opens out to us the whole vast possibilities of the etheric Plane. It is *through the atom* that the higher Plane operates upon the lower.

Let us now see how this applies to the question as to the nature of the germ-cell; first of all as to its physical constitution; and then, further, as to the forces which must lie behind or within its mere atomic mechanism.

To begin with, we may assume that there is some specific difference in structure between one germ-cell and another, whereby one produces, say a dog, another a rabbit, another a monkey, and another a man; not to mention all the specific differences between one individual and another.

Moreover, since by heredity certain organs or parts of the body can be modified without change of the other parts, it appears tolerably evident that there must be contained in the germ-cell some specific units which determine the function of each separate part.

These units were first postulated by Herbert Spencer in his *Principles of Biology*, and were called by him *physiological units*. They were supposed by him to be the minimum unit, so to speak, of specialised vital structure; but, as such, to be still immensely complex considered as chemical structures. They have since been called by many names by different biologists, but are perhaps best known now under the name of *determinants*, given to them by Weismann, to whose brilliant theory of heredity we shall presently refer.

"My determinants and groups of determinants," says Weismann, "*are simply those living parts of the germ whose presence determines the appearance of a definite organ of a definite character in the course of normal evolution.* In this form they appear to me to be an absolutely necessary and unavoidable inference from the facts. There *must* be contained in the germ, parts that constitute the reason why such other parts are formed" (*Germinal Selection*, p. 54).

A miscrocopic examination of a germ-cell cannot of course penetrate as far as these determinants, which are, therefore, purely hypothetical. The minute germ-cell, 120th of an inch in diameter, is seen under the microscope to consist of a kind of granular, semi-solid substance, which is in fact *protoplasm*, the physical basis of life. This protoplasm, however, is not the real germinal part of the cell, but serves rather as a nutritive in the early stages of fructification.

The real germinal part of the cell is a minute speck called the *nucleus*, and when this is stained with an appropriate dye it exhibits a net-work of fine interlacing fibres, known as the *chromatin* of the nucleus. In the first stage

of fructification this *chromatin* breaks up into a number of separate rod-like bodies known as *chromosomes*. These *chromosomes* may be seen by the aid of a very powerful microscope, and after treatment with suitable dyes, to contain a number of still smaller bodies called *microsomes*, which are the smallest bodies it is possible to detect, and which might therefore be about 100,000th of an inch in diameter. Weismann assumes, however, that each of these consists of still smaller bodies, which are his *determinants*, and he postulates that these determinants are built up of still smaller units, which he calls *biophores*, and which, therefore, rather than the determinants, might perhaps be said to correspond to Herbert Spencer's *physiological units*.

By comparison with the size of molecules which we have given in Chapter III., it will be seen that even in these small bodies we may have an almost unimaginable number of atoms or molecules. If we assume that a compound molecule may be about 150,000,000th of an inch in diameter, we see that there would be 500 in the length of 100,000th of an inch; $500 \times 500 = 250{,}000$ in such an *area*; and 125,000,000 in a solid cube. As no two molecules, however, actually touch each other, we must probably reduce this number very considerably, but still the number contained in a *microsome*, and the actual physical conditions which may prevail therein, are quite beyond our powers of imagination. Out of this veritable *microcosmos*, each individual man emerges into the objectivity of that larger world which constitutes his physical Plane existence for a brief space of time.

We see, then, that if we stretch our imagination back to the living *biophores*, we have reached a sort of hypothetical atom of life, and it has even been mooted that this ultimate living unit may be identical in nature in all living organisms; just as there is probably an ultimate physical unit of matter which is identical in all the chemical elements. In the living organism, however, this ultimate unit must still be an exceedingly complex chemical molecule, and must leave room for an almost infinite variety of *internal* characteristics; and in the ultimate chemical unit also we must consider that *identity* can only have a relative meaning, and cannot apply to *internal* characteristics, but only to external behaviour in a limited range of phenomena. No two atoms can ever

be considered to be absolutely alike, any more than any two leaves of a tree.

If, however, we postulate any such ultimate atom of *living* matter as the *biophore* is supposed to be; if we postulate that anything less than that, any less complex system of physical atoms and molecules, is *not* living: we are face to face with a very serious philosophical difficulty. Observe that this ultimate unit of life is admittedly hypothetical. It is far more hypothetical than the chemical atoms themselves, for these—whatever they may really be, or whatever lesser units they may be resolvable into—can be manipulated and combined in definite proportions and with calculable results.

It is far otherwise with the hypothetical life units; and moreover, if we say that there is a certain minimum of material, a certain minimum complex of chemical elements at which life *begins*, we are begging the whole question as to what life really is; for no one can tell us what are the properties or characteristics of this hypothetical unit of living matter which can justify us in calling it *living*, whereas if we remove a single molecule it is immediately 'dead.'

Further than this, by postulating such an hypothetical unit we immediately establish a gap between living and non-living matter: between matter which is "sensitive and thinking"—to use Haeckel's terms—and matter which is absolutely inert and dead; and we certainly cannot postulate that the mere addition of a single chemical molecule will make a number of molecules "sensitive and thinking" which were not so before.

How then shall we bridge this gap, for bridged it undoubtedly must be if we are to adhere to our fundamental thesis that the Universe is a Unity, that the same principles operate in the microcosm as in the macrocosm?

Haeckel, as we have already seen in Chapter IX., has boldly attempted to bridge the gulf by postulating that all matter is alive; but his presentation of this thesis is neither consistent nor logical, and he reduces *life* to a mere figure of speech. Life according to him has its roots, not in something immeasurably greater than any of its finite manifestations, but in a mere "inclination for condensation, a dislike of strain" inherent in the primitive world-stuff. Mr. M'Cabe, Haeckel's translator and apologist, tells us, indeed—as we

have already seen (p. 204)—that "the sensation and will he attributes to atoms are obviously *figurative*, and merely reminders of his doctrine of the unity of all force or spirit."

With this doctrine of unity we are completely in accord; but for us it points in the direction of an Infinite Life and Consciousness towards which the whole creation moves, towards which we as individuals are evolving, and which is certainly *involved* in what we know as physical matter, otherwise it could never manifest therein in the slightest degree, whatever might be the amount of complexity of the physical organism.

There can be no doubt that there is a growing tendency to break down the arbitrary distinction between 'living' and 'dead' matter. There is a growing tendency to accept *abiogenesis*, the evolution of organic out of inorganic matter. But there is no reason why that principle, even if definitely established as an actual demonstrable fact, should upset our most lofty ideals as to the dignity of human life, the powers which we know we already possess, or the glorious future which lies in front of each individual in the further unfolding of his nature. The fact of *abiogenesis*, if once established, would not degrade, but rather it would infinitely extend the meaning of the term *life*. It would establish the universality of life, and make it coexistent with motion. When that is established, we shall find it clearly understood that life cannot *evolve* any more than force, energy, motion, substance, call it what you will—the *primum mobile* of the universe—for Life *is* that *primum mobile*; and what eternally IS, is complete, full, absolute.

But the particular individualised manifestations of this Unitary Power—those phenomenal aspects of that Power which we commonly term the Universe—do evolve; or at all events they have the appearance in our consciousness of an ordered sequence in time and space.

Haeckel, and the allied school of materialistic thinkers, tell us that life is only a form of manifestation of that same energy which we know in a *mechanical* manner as all the different varieties of 'forces.' And why not? That makes no difference to our conception of life: only, we should turn the statement round the other way, and say that mechanical force, energy, or motion, is merely one manner in which we apprehend the *primum mobile* which is ***Life.***

Returning now to our germ-cell, we find that there is neither a philosophical nor a logical reason why we should postulate an ultimate unit of life; there is no reason why we should stop at the *biophores*; we must go right back to the atom itself—and beyond—in order to find that *life principle* which moves and works in ALL; in the atom as well as in the speck of protoplasm; in the mineral as well as in the vegetable, the animal, or the human form.

That this One Life should show varying degrees and aspects of its infinite nature in the infinite variety of forms which constitute the phenomenal world, is merely an empirical fact of our present consciousness; nor can we in any possible way conceive that a single atom or molecule should exhibit any *more* of the nature of that One Infinite Principle than just so much as makes it an atom or a molecule. It is an atom or a molecule—*to our consciousness*—just because our consciousness only apprehends its nature in precisely such a *limited* manner. Have we not already seen that even a physical analysis of the atom opens out into Infinity?

Science may analyse the germ-cell down to its last atom: it will still be face to face with the problem of life, thought, consciousness. It would be no greater mystery, no greater wonder than it is at present, did we find the physical body of each individual man evolving out of a single atom, instead of from a minute germ-cell. Nay, for anything we know, there may be in that germ-cell one single atom which determines the characteristics of the individual which is presently to appear in the—to us—larger world of time and space; for every single atom, in virtue of its oneness in *substance* with that Infinite Life which ensouls the whole Universe, both seen and unseen, is capable of mirroring the whole past—and the whole future.

Now it is precisely this power of mirroring, of recapitulation, of *memory*, which is the puzzle in any purely materialistic theory or explanation of the evolution of the plant or animal from the germinal cell. *Something* in that cell possesses a memory, is able to recapitulate the past; and not merely so, but is able to repeat with infinite facility, and apparently automatically and unconsciously, processes which in their primal inception have necessitated millions of years of ceaseless effort and strife.

Modern science, which does not go beyond the physical

Plane in biological matters, and which looks for the explanation of all physiological processes in the region of physics and chemistry, is compelled to postulate that this *something* must be of a physical nature; it must be an atom, or a molecule, or a biophore, or some larger or smaller, or more or less complex unit of physical matter.

But if this living " sensitive and thinking " unit of physical matter possesses this marvellous power of recapitulation, it must have either itself individually passed through all the previous experiences which it now reproduces, or else there must be a direct physical continuity of some kind, right back through all the vast past of the evolutionary process, by means of which the accumulating experiences are *handed on* from germ-cell to germ-cell.

But how is this continuity possible if the mother germ-cell is formed out of totally new matter absorbed as food by the parent? It is precisely this difficulty which led Weismann to enunciate his celebrated theory of the immortality of the germ-plasm. Briefly stated, this theory postulates that when the parent germ-cell begins to differentiate in the formation of the new individual, some portion of it is exclusively reserved for the formation of the reproductive cells of the new individual, and that thus the germ-cells which this new individual, when it reaches maturity, is capable of throwing off, are directly derived, not from the body of the new individual, but from the original parent germ-cell. There is thus a continuity, a direct line of lineage of the germ-cells, quite distinct from the bodies of the individuals to whom these germ-cells give rise, and to which they belong for the time being, and which thus only serve, as it were, as a temporary habitat or shelter for this directly continuous line of descent from germ-cell to germ-cell.

In some of the lower animals this continuity has been actually observed, but in the higher animals and in plants it cannot be recognised, because the new reproductive cells can only be observed when the individual has reached a considerable maturity.

Notwithstanding the highly hypothetical nature of Weismann's theory, it found many enthusiastic supporters, perhaps more particularly on account of its being a distinct advance on the older, or Darwinian, theory of *pangenesis*, which supposed that something—some " gemmule "—repre-

sentative of every cell in the parent's body found its way into every germ-cell. It is difficult in the first instance to imagine how this could be effected in the constant flux of cells in the parent's body; and in the second place it would not account for *recapitulation*, for the *memory* of all the past history of the race, which must certainly inhere in something.

There are many phenomena, on the other hand, which appear to be directly antagonistic to Weismann's theory, chief among these being, that in most of the higher forms of plant-life there are tissues belonging to the individual body of the plant, and not forming any part of the special reproductive apparatus, which are, nevertheless, capable of reproducing a similar plant. Further, there are facts of regeneration and repair, as when a lobster grows a new claw. In all cases of propagation by cuttings of plants, roots are formed out of the tissue of what was previously the stem of the plant. These and similar facts have led to the formulating of another theory of heredity, by Hertwig. This further theory supposes that *every cell* of the parent body contains germinal matter for *every part* of the body, so that it may virtually become a germ-cell if called upon by special conditions to perform that function, or some part of that function.

We are not concerned here with the great controversy which still goes on around these conflicting theories; indeed we are not really concerned with any purely *materialistic* explanation of the great facts of life and consciousness. No one has recognised more clearly than Weismann that his own theory is of necessity only an effort to form a mental image, or "construct," of that which is unknown and unfamiliar, from that which is known and familiar. Some kind of mental image is certainly necessary if any advance is to be made at all, and the function of a working hypothesis is just as much to enable us to advance, as to form a complete explanation of all the known facts and factors. "Is any one presumptuous enough to believe," Weismann asks, "we can infer from our slight knowledge of the chemical constitution of the germ of a trout and a salmon the real cause of the one's becoming a trout and of the other's becoming a salmon?" (*Germinal Selection*, p. 7). And again: "As if any living being could have the temerity even so much as to guess at the *actual* ultimate phenomena in evolution and heredity!

The whole question is a matter of symbols only, just as it is in the matter of 'forces,' 'atoms,' 'ether undulations,' etc., the only difference being that in biology we stumble much earlier upon the unknown than in physics" (*Germinal Selection*, p. 59).

If heredity were absolutely constant in its action, if the offspring always faithfully resembled the parent, there could be no such thing as evolution. But amongst the progeny of any particular individual there are always more or less well-marked *variations*, which are more and more in evidence the higher we ascend in the scale of evolution; and it is upon these *variations* that "natural selection" operates in the evolution of species and of the race. Natural selection is the selection of favourable variations, and these favourable variations are transmitted and perpetuated by heredity.

But when we come to inquire into the causes or physical conditions of variations, we are face to face with a problem which is even more difficult and intricate than that of heredity itself. Heredity and variation are really part of the same problem, that of the nature of the germ-cell; nevertheless variation can to a certain extent be treated separately, and, indeed, there has probably been more controversy as to the origin of variations than there has been concerning the nature and operation of heredity considered merely as the transmission of characteristics already in evidence. The whole question is a very complicated one, and we can only indicate one or two factors which bear upon the philosophical principles we are endeavouring to elucidate.

Variations might conceivably arise owing to the transmission of acquired characteristics. Every individual in the course of his life changes more or less for many reasons, due for the most part, however, to pressure of environment; and it is conceivable that such modifications, both of physical and mental characteristics, should affect the germ-cells which give rise to the progeny of that individual; indeed, at first sight it might seem only natural that such should be the case.

Yet, strange to say, this is one of the questions respecting which the greatest divergence of opinion exists among leading biologists. Darwin fully accepted the transmission of acquired characteristics, but it has been absolutely denied by Weismann and his school. At the present time the controversy is still open, the balance of the evidence probably showing that the

influence of acquired characteristics, if transmission takes place at all, is certainly by no means the principal factor in the production of variations, or even an important one.

What, then, are the causes which are operative in the production of variations—variations which, be it noted, are not so much haphazard differences of colour or size or shape of particular individuals of the same species, but which lead steadily towards a definite alteration of the type, towards the production of an animal totally unlike its ancestors in exterior appearance, internal construction, and in the part which it plays in the general scheme or economy of nature?

Take, for example, the evolution of the horse from a five-toed animal somewhat resembling a small fox, whose fossil remains have been found in the lower Eocene strata in New Mexico. In Yale University may be seen a continuous series of fossil remains, connecting this "Eohippus" with the horse of the present day, and presenting a gradual transformation of the bony frame: a gradual transformation of four out of the five fingers or toes, which, in some form or other, are typical of all the vertebrates, of the reptiles and birds as well as of the higher animals and man.

An examination of these fossil remains shows four of the "toes" of the original ancestor of the horse gradually retiring from use, as it were. In the Miocene rocks are found the remains of the "Miohippus," having three complete toes, and higher up the leg the rudimentary remains of a fourth, corresponding to our little finger. These remains are also found in Europe, and are called the "Anchitherium."

Still more recently, in the Pliocene rocks, are to be found the remains of the "Protohippus," or "Hipparion," which has one large digit, now beginning to resemble the lower part of the leg of the present-day horse, and two smaller digits higher up the leg. In the higher Pliocene rocks are to be found the remains of the "Pliohippus," which are only slightly different from those of the horse as we know him to-day, and in which the rudiments of the two extra digits are still to be found. Thus the knee of the horse represents, and is evolved from, the typical wrist of the vertebrates, whilst the lower part of the leg is simply one overgrown finger or toe, of which the hoof is the claw or nail. This is one of the best-attested cases of evolution, and one which is often quoted as absolute proof of the general principle.

But when we come to consider the details of the process, we are confronted with a problem of the deepest import. We see that there must have been an incalculable number of variations *all tending in the same direction.* The variations in the countless individuals of any one generation as compared with those immediately preceding them must have been very slight, and we have to account not merely for the fact that such slight variations can occur—we can study these slight variations in the individuals of any species to-day—but that they should *persist in a definite direction,* resulting in the evolution of an animal so highly useful to a still more highly evolved species, the human race.

Further than this, it is tolerably certain that the particular variation in the direction of this radical change of species or type could not have been the only variation. In any one generation there must have been innumerable other variations not in the direct line of change we are considering, but these by some process of selection appear to have been rejected.

We have then, in the first place, the problem as to how the variations arise at all; and in the second place, the question as to what it is which selects.

Was the horse in view at the commencement of the process, or did the horse result from the mere blind chance that the slight variations in certain individuals of any one generation were advantageous to those individuals in the struggle for existence? The theory of natural selection assumes this latter to be the case; it assumes that certain variations gain the ascendancy because they are more useful *to the individual.*

But we are met here with the difficulty that, in any series of variations leading to a definite transformation, such as that of the horse: not merely the initial variation, but every step of the progressive variations from one generation to another, must have been so slight that it is impossible to assert that such a slight variation would be of any service *to the individual* in the natural struggle for existence.

We may take as another example of this the protective colouring of the wings of certain butterflies which imitate the foliage upon which the insect is accustomed to alight. In certain species this colouring exactly resembles a particular leaf; it shows not merely the general colour of the leaf, but also a definite midrib and branch ribs. In some cases this veining is partly on the hind-wing and partly on the fore-

wing : the continuation from the one wing to the other fitting exactly where the wings overlap each other when the butterfly is reposing, but not otherwise.

Now we can see plainly how such markings, when fully developed, are a protection against enemies, making it difficult to discern the insect when not in flight ; but what we cannot see is in what way the first start of these variations can have been of any advantage to the individual in the struggle for existence ; when, for instance, only a single spot appeared of what was subsequently—who shall say through how many ages—evolved into a definite imitation of the midrib of a certain leaf.

It is not merely a question as to how the first spot or subsequent spots appeared, but as to how those in the right direction to form the midrib were *selected* in preference to others : when a promiscuous spot would, at this stage, appear to be quite as much advantage to the individual as a definitely located one.

It is, in fact, impossible to conceive that such definite results as these could have been obtained by a mere survival of the fittest among an almost incalculable number of merely *accidental* variations : of variations, that is, determined by the mere accident of environment. The incredibility of this is immensely increased when we consider that, in a case like that of the horse, it is not merely one part or one organ which is undergoing this directive variation, but a number of parts and organs simultaneously, all tending to the same end.

These considerations have led to a very general recognition of the fact that *definitely directed* evolution cannot be accounted for by mere natural selection ; and has even led some naturalists to reject natural selection altogether as a factor in the evolution of species.

The conflicting theories to which the foregoing and innumerable other facts have given rise cannot be considered here ; but, taken broadly, they may be said to tend in one direction, that of looking for the missing factors in some internal condition or process operating in the germ-cell ; in other words, to internal rather than to external causes.

One of the most interesting and best known theories in this connection is that of Weismann, who supposes that there is a natural selection going on in the germ-cell itself, among the determinants of that cell. This may be, and probably is,

very largely true; but so far as any real explanation of the root of the matter is concerned, Weismann's theory is merely a transference of natural selection—blessed word—from an external region where to a certain extent we may observe its operation, to an arcane region where it is wholly impossible to follow it. But Weismann himself, as we have already seen, distinctly repudiates any idea of penetrating to the real *causes* of either heredity or variation.

There is undoubtedly something in the particular germ-cell which represents the particular variation of the particular individual about to be produced; must we not also say that in that mysterious *inwardness*—which ends nowhere short of absoluteness—there is undoubtedly something which represents not merely the particular stage which the species has reached at that particular time; not merely all stages through which the particular species has passed to reach its present development; but also all stages through which it shall pass in what to us is the *future*: the definite line of variations which will be followed up in order to produce transformations not as yet materialised on the physical Plane, but undoubtedly seen and known on those higher Planes where all *causes* are to be found before they become *effects* on the lower Plane, because any *real* cause *is one with its effect.*

If it is legitimate to postulate hypothetical "physiological units" or "determinants," may it not be legitimate to stretch our scientific imagination yet a little further, to a region behind or within the mere physical atom, and find there a "germ" from which the species and the race unfolds as surely and inevitably as the individual?

Is not all evolution, in fact, the unfolding of that which *already exists*: somewhere, somehow, in that One Noumenon which *originates* all things which come forth into time and space?

The infinitely small reflects the infinitely great. To be consistent, we must boldly apply to universals every principle which we find operating in particulars. We are not real Monists unless we do so. We have failed to grasp the essential Unity of the Universe if we have failed to see that that Unity is something infinitely more than a mere uniformity of "substance," or universality of motion. Out of Primordial Substance is evolved the next lower Plane; out of that, one still lower appears in due time; out of that again appears,

let us say, the Etheric; and in due course from the Etheric appears the Physical. But the unfolding of all these Planes is just as inevitably contained in that Primordial Substance as is the unfolding of the individual from the individual germ-cell. Primordial Substance is the Universal germ-cell—the Primordial Substance of any one particular Universe, that is to say—and every physical germ-cell *is*, in its inmost nature, that Primordial Substance; not, be it observed, a *portion* of that Substance, but that Substance itself: for that Substance is a *Monad*, it is One and indivisible. There can be no portion of a true Monad.

Every atom opens out into infinity; every atom contains the whole Universe; for every atom *is* Primordial Substance, and Primordial Substance is a Monad. Thus we may, and must if we are really consistent Monists, extend the theory of Hertwig far beyond any mere physical cell. Every cell in the parent's body, says Hertwig, contains germinal matter for every part of the body, so that it may virtually become a germ-cell if called upon by special conditions to perform that function, or some part of that function.

Every atom, we shall say, being in its inmost nature nothing more or less than Primordial Substance, contains "germinal matter" for the whole universe, so that it may not merely virtually *become* a universe if called upon by special conditions to perform that function, but it never *is* anything less than a universe, than *the* universe, could we but perceive it truly *in all its relations and proportions*.

We are Idealists, not Realists. We have clearly perceived that things are *not* what they seem; that time and space are not realities, but modes of consciousness; that they are the *how* we see things, and not *what* things are.

And we cannot really be Monists unless we are also Idealists. Our One Absolute Principle—call It God, or Substance, or what you will—can never be anything more than a mere figure of speech unless we can pierce through the time and space elements of our consciousness, and unify them, as well as the mere matter and force elements. For the unity which we really require to realise, the only unity which can be of any practical service to us in that deeper struggle for existence which is the struggle to realise our real nature, the struggle to exist, not as mere physical beings, not by bread alone, but verily in that larger life and consciousness which shall finally

transcend all illusion: is the unity of our own life and consciousness with that Infinite Life and Consciousness which exists in ALL, and which is beyond all time and space considerations.

To realise that larger Life and Consciousness as none other than *Ourselves*, must assuredly be the end and goal of our Evolution.

CHAPTER XIII

THE EVOLUTION OF MAN

" Thus we have given to man a pedigree of prodigious, but not, it may be said, of noble quality. The world, it has often been remarked, appears as if it had long been preparing for the advent of man ; and this in one sense is strictly true, for he owes his birth to a long line of progenitors. If any single link in this chain had never existed, man would not have been exactly what he now is. Unless we wilfully close our eyes, we may, with our present knowledge, approximately recognise our parentage ; nor need we feel ashamed of it."—DARWIN, *Descent of Man.*

CHAPTER XIII

THE EVOLUTION OF MAN

THE evolution of Man, so far as that evolution is a mere physical or organic process, is part of the general process of evolution with which we have been dealing in our last chapter.

Man appears as the latest and furthest result of that vast process of organic growth and development which apparently commenced untold and unrealisable ages ago, in some primordial form of protoplasm.

Protoplasm is the basis of all living tissue. If we take some such tissue from a plant or animal, and examine it under the microscope, we find that it is built up of cells, and that these cells are for the most part composed of a semi-transparent, greyish substance, looking something like a thin jelly. That is protoplasm, the basis of all living organisms.

Examined with a high-power microscope, protoplasm appears to be more or less granular in structure, and certain *movements* indicative of what we call *life* can be observed.

Briefly stated, these movements are the equivalent of most, if not of all the processes which go on in higher organisms. They include propulsion, response to stimuli, sensitiveness, feeding, reproduction, respiration, excretion, growth, conductibility, etc.

Protoplasm can hardly be said to be a definite *organism*; it is rather the organic basis of all organisms; and, however primitive, or however complex the organism may be, whether it be a single-celled Amœba or Infusoria, or whether it be the brain of the most highly developed man (or woman): the activity of the whole organism is ultimately dependent upon the activity of each individual cell, and the activity of the cell is dependent upon the activity of the *protoplasm* of which it is composed.

Protoplasm may almost be said to stand in the same relation to the organic forms which it serves to build, or which

evolve out of it, as Primordial Substance does to the whole universe of forms : which are one in Substance, and dependent upon that Substance at every moment for all their activities, but yet are infinitely varied in structure and function and power to express the indwelling *Life*.

But even protoplasm is not the real physical commencement of the process of evolution of organic forms on this Globe, though it is the point at which science—at the present time—commences to recognise the action of *life*. Protoplasm is only one step further in the evolutionary process than what we know as *inorganic* matter. It is not the point where a totally new principle called *life* steps in, nor even the point at which life begins to manifest new activities or qualities. Physically speaking, protoplasm may be regarded as only a very complex molecule.

But Life itself must be universal. The fact that it can manifest in or through matter at all, gives us only two alternatives as to its connection therewith : (*a*) All matter is *dead*, and life is a principle in itself which acts *upon* matter, but is not inherent in it ; or (*b*) life is inherent in matter, *quâ substance*. In the former case we have in the universe an eternal duality, we have to account for the existence of two totally different and distinct things, either one of which may, and by this hypothesis does, exist quite independently of the other. This is the basis and contention of all dualism, theism, or supernaturalism. In the latter case, which is the position and contention of all Monism, there is only One Principle or Substance at the Root of all subjective as well as all objective activity ; and life and matter, or consciousness and matter, are two aspects of that One Root Principle.

On this latter basis, Life must be universal. The fact that it can *manifest* in or through matter at all, shows that it must be inherent in Primordial Substance, of which physical matter is only one mode or aspect.

We cannot ascribe to one portion of Primordial Substance a quality or attribute which is not possessed by another portion. All that we can really say is, that in our limited knowledge or consciousness, one portion may *appear*—as phenomenon—to manifest in greater or lesser degree the inherent essential nature of Primordial Substance itself.

In reality Primordial Substance is *One* — that is our fundamental position as Monists—and this appearance of

separation is in our individual consciousness, and not in Reality.

Could we but see a single atom in its entirety, we should see the whole Universe.

The evolution of physical matter precedes the evolution of protoplasm, even as the evolution of protoplasm precedes that of the lowest forms of life, and these again precede the higher forms, with present-day Man as the last result.

We must now endeavour to look at this evolutionary process in its widest possible aspect ; we must endeavour to determine how and in what sense the evolution of Man is the inevitable result of the process ; and, further, what the continuation of that process into the illimitable future may be legitimately considered to have in store for the individual and for the Race.

When the chicken evolves from the egg, or the individual man from a minute ovum or germ-cell, there is an ordered sequence of unfolding ; a sequence which, as we have already seen, is a marvellous recapitulation of stages previously passed through in the history of the species and of the race.

Modern biologists and embryologists have no doubt whatever that there is some definite structure within the germ-cell which determines this predestined course of unfoldment ; and all their efforts are at present confined to the problem as to the nature and structure of the *physical* constituents of the germ-cell or germ-plasm.

The old theory as to the contents of the germ-cell was that known as the " preformation theory," which represented that the complete body was already contained in the ovum ; in such a minute form, however, that it could not be detected. On this supposition, therefore, the development of the individual was not what would now be understood as an evolution, but was in reality nothing more than a growth, a stage only a little further back from the growth of the child to the adult.

This theory is now completely discredited. Something physical undoubtedly exists in the germ-cell which inevitably brings forth an individual of a certain species ; an individual with certain hereditary physical characteristics ; but that *something* is, in form and constitution, quite other than that which subsequently evolves from it, even as the moth is utterly different from the caterpillar.

The question which we shall have to ask is simply this: how far are we justified in applying this principle, which we find thus operating in particular phenomena, to universals? How far is the whole evolution of Man—and not of Man only, but of everything which appears in the world of phenomena—an *evolution*, or "ordered change," which could as certainly be foreseen by a higher Intelligence than ours as we can foresee that a chicken and not a duck will evolve from a hen's egg?

The answer to this question must be largely determined by our conception of the nature of the Absolute Substance or Noumenon which lies at the root of all phenomena; but we may remark that the whole tendency of our advancement in knowledge, both scientific and philosophical, is to apply more and more to universals the principles which we find to be operative in particular phenomena. Science does not hesitate to do this in the case of such wide generalisations as that of the indestructibility of matter—or substance—and the conservation of energy, and also in connection with the general principle of evolution as a cyclic change operating throughout the whole phenomenal Universe.

We must endeavour, therefore, to apply the same principle of correspondence and analogy to Life and Consciousness: of which Phenomenon is only the objective expression or symbol.

The position we have now reached is this: that physical forms of matter—atoms and molecules—have evolved out of etheric substance; that physical matter having reached a certain stage of cooling and condensation, *organic* forms of the most primitive kind begin to appear; and that the process which we conventionally term "the evolution of life" has then definitely commenced: this process gradually resulting in the innumerable forms of the vegetable, animal, and human kingdoms as we have them to-day.

But we have learnt that Life itself does not really evolve, any more than *motion*; it is only form, appearance, phenomenon which presents to our consciousness this flux of motion, or flow and ebb from subjectivity to objectivity, and back again to subjectivity—in one word, this ever *becoming*.

We have seen also that Life and Consciousness are certainly not *products* of phenomena; rather they are them-

selves the cause of phenomena. It is common to speak of the evolution of organic forms as if they were the *cause* of life: whereas organic evolution can only be a *process* of life. We may study and understand the process to a large extent merely as phenomenon or as mechanism, and it is the business of science—as that term is understood to-day—to do this.

But to understand the process in any real sense, in any sense that is related to our own life and consciousness, in any sense which can give it a real connection with *ourselves* as actors in the great drama—as actors, not merely in one short span of physical life, but as actors playing their part from beginning to end of the play—we must consider phenomenon as something much more than as a mere mechanism which may possibly go on with or without us; we must, in fact, consider the relation which must necessarily subsist between our own individual selves and that Universal Self which is the great Drama.

Whatever may be the apparent separateness of any individual phenomenon, or any individual *life*, we know sufficient to state that nothing individual can really be separate from the One Self which is the Root of ALL. That which appears to us to be separate, individual, discrete, is merely a *form*, which in our consciousness comes into existence and goes out again; a form of motion or matter considered objectively; a phase of the One Life considered subjectively.

If we take the objective process as a reflection or manifestation of the subjective process, then the mere physical fact that all *matter* of any lower Plane is evolved out of the *substance* of the next higher Plane, and also that all energy on any Plane comes by influx from the next higher Plane, enables us to understand very largely the principles which must also govern the involution of Life and Consciousness.

All life must necessarily come from a higher Plane; but so far as the *form* which it may possess on that higher Plane is concerned, we know nothing in the scientific sense in which we do actually know the forms which life assumes on the physical Plane.

Doubtless at a later stage of our evolution we shall be able to know and understand the forms of life on the higher Planes, as clearly as we now do those on the physical Plane; indeed, we are not altogether without information on the subject at the present time, through the exercise of abnormal

faculties in certain individuals—though such information can only be accepted with great reserve, failing any unanimity on the part of the seers, or anything approaching scientific methods of investigation.

In accordance with the principle of cycles, by which every individual cycle must be part of some larger whole: we must not merely refer back the evolution of the individual man to the greater cycle of the evolution of the whole of Humanity, but also this latter cycle to something still greater, in the sense of being more cosmic, and nearer to the One Noumenon, in which all cycles disappear.

Being more cosmic in this sense it must also belong to a higher Plane. The physical evolution of Man must, in fact, be only a small portion of a larger *life* cycle, which must have its immediate cause on a higher Plane. The *life* must, in fact, have individualised itself, so to speak, on the higher Plane in the process of emanation from the One Noumenon; it must be traced down through all the Planes until it reaches the physical; and, on the return half of the complete cycle, it must gradually merge its smaller individual cycles on the lower Planes into the larger ones on the higher or cosmic Planes; till finally all are merged once more in the incognisable Absolute.

Every individual man, then—individual on higher Planes as well as on the physical—forms part of the great evolutionary process which has MAN THE DIVINE as both its cause and its objective or result. And though the actual visible influence of each individual is so infinitesimally small in comparison with the whole, that we might even conceive of millions of individuals going out of physical existence without any marked result, yet we must here—as in all Nature's processes—consider that the Whole is builded of atoms: that every form which Nature fashions out of physical matter is fashioned atom by atom, so that even the infinitely great appears as if it were something which is attained by infinite increments of the infinitely small.

In the processes of Nature do we not, indeed, see that the individual apparently counts for nothing; that millions are ruthlessly destroyed, or swept hither and thither like dead leaves in the autumn wind, whither they will not?

But although the individual unit thus appears to us to be of such small import as compared with some larger part

of the infinite Whole : yet we may safely affirm that, however insignificant that unit may appear to be when seen only in that small relation and proportion which makes it—to us—such a narrow and limited thing, it is in reality a necessary part of the integral Whole ; and were one single atom really to go out of existence, the whole Universe would vanish with it. Have we not, indeed, already seen that every atom is not merely *a* universe, but *the* Universe ; that, traced back to its inmost nature, and seen in *all* its relations and proportions, it expands to Infinity.

The form changes, disappears from our ken ; but that which is the *cause* of the form remains. Cause and effect, so far as they appear to us to be a *sequence*, are only the same abiding Root Principle seen in different aspects.

Every physical form has a commencement in *time*, and an end in *time* ; and if we would look for the *raison d'être* of its appearance we must look on the next higher Plane ; if we would look for the sustaining power of its present existence we must also look on the next higher Plane ; if we would look for the *results* of its physical existence we must again look for them on that higher Plane into whose *substance* all physical forms must sooner or later be resolved. All things come into existence by efflux from the next higher Plane ; they are already *there*, on that Plane, as what we call *cause*, before they become *effects* on the lower Plane. Yet in reality the lower Plane is only the higher, seen or known in some limited manner. Everything which happens on the lower Plane, happens also in some manner on all the higher Planes ; but it is not the physical happening which is the *cause* of the higher happenings, nor even *vice versa* ; there is only one happening, seen and known by the limited mind and consciousness in many ways.

On the physical Plane we have the phenomenon of a series of organic forms of life, commencing with primitive structures which are hardly distinguishable from inorganic molecules, and which, indeed, we have already seen, there is every reason to believe have in fact evolved out of what we conventionally call *dead* matter. We may, in fact, regard the evolution of organic forms as one continuous process with the evolution of matter itself ; the former evolution being a preparation for the latter. The *raison d'être* of the whole process must be apprehended as existing in some cosmic form of Life and

Consciousness which is the Noumenon of this particular cycle of evolution; and which, as such, must exist on a higher Plane. There is no meaning whatever in the mere evolution of matter in any of its stages, apart from a permanent Principle of Life and Consciousness which lives and experiences, or expresses itself in or by phenomenon.

This definite cycle of physical evolution eventuates in man as we know him to-day, and we might briefly tabulate the broad distinctive stages from Protoplasm to Man as follows :—

MAN
MAMMALS
BIRDS
REPTILES
AMPHIBIANS
FISHES
INVERTEBRATES
METAZOA
MULTICELLULAR PROTOZOA
UNICELLULAR PROTOZOA
PROTOPLASM

If, then, we take man as we find him to-day, he appears to have descended—or rather ascended—from the very lowest forms of life, and even from the mineral kingdom, through the vegetable and animal, to which, indeed, physically he still belongs, being classified as a *placental mammal.* Physically, man to-day is only a higher animal, characterised principally by his increased brain development.

This physical line of descent or evolution is something—as Darwin remarks, in the quotation we have given at the commencement of this chapter—of which we need feel no shame. We need feel no more shame of this whole process than we do of the fact that each individual to-day has commenced his existence as a single germ-cell, and has recapitulated, in the "nine months which go to the shaping an infant ripe for its birth," the stages through which the whole race has passed.

But now we must ask, this being so, at what point in the process did 'man' really commence? At what point can we say, this was a *man,* while his parents or progenitors were only animals?

It is, of course, as impossible to answer that question as it is to say of any particular human embryo at what point in its recapitulation it abandons the merely animal stage and becomes

human ; one stage shades off by imperceptible degrees into the other. In view, however, of the wider and deeper aspect of the question which we must now present, it is not important that this question should be answered ; nor do we need to look for any " missing link " between the ape and man.

If we here apply the principle of correspondence and analogy—which we believe to be the key to all the operations of Nature—we find a solution of the problem which renders of quite secondary importance most of the great controversial questions which are so disturbing to many minds. We shall even place man and the animals in exactly the reverse relationship to that which is commonly accepted. If the premises which we may now advance are admitted, we shall see that man has not descended from the animals, but, on the contrary, the animals have descended from man.

The principle of correspondence and analogy which we must here apply is this : that what the germ-cell is to the whole series of changes which eventuate in the individual man, so is the primitive protoplasm to that larger series of changes which eventuate in physical man as we have him to-day.

Individual man to-day does actually evolve from a protoplasmic germ-cell. Given the necessary conditions of environment, the particular individual *must* inevitably evolve from that cell ; and what we must now see in the larger process of the evolution of Humanity is simply this: that Man (Humanity) —a definite predestined Humanity—*had to evolve* from the primitive protoplasm as inevitably as the individual from his own particular germ-cell.

Do not let us be afraid here of the time-element. Do not let us imagine that because the process of man's evolution is spread out over millions and billions of years, that therefore it is governed by any different principles than the evolution of the individual. There is only ONE LIFE working in all ; and to that ONE LIFE there is no great and no small, either in time or in space.

Our fundamental premise is, that Man (Humanity) is a *Unit*. Our root principle, indeed, is that the whole Universe is a *Unit*. But within that larger Unit we may and do distinguish smaller units—units apparently separated from the larger or ONE UNIT by time and space considerations.

Such a lesser unit is Humanity ; separate in appearance,

though not in reality; and our second premise is, that the whole evolution of *life* on this Globe has for its object the evolution of Man.

Man was in view at the commencement of the process; Man—not as we know him now, but possibly as something so glorious that we have hardly dared as yet to lift our eyes and our aspirations and endeavours to such an ideal—even such a MAN, such a Race of Men, is the consummation and the goal; in view from the very beginning, and therefore complete and perfect from the 'beginning' in the Divine Idea, in which IDEA there is no past and no future.

Let us now bear in mind two facts, which we have already considered in Chapter XII. We have seen, in the first place, that the development of the individual man from the ovum or germ-cell is a *recapitulation* of the whole physical process of evolution, from the very lowest, or protoplasmic stage, through all the representative types of the animal kingdom. We have also seen that there is a direct physical line of descent from germ-cell to germ-cell. In other words, one line of descent, at least, from some primordial form of protoplasm has resulted in man as we have him to-day.

Consider now for a moment that man might have been the only surviving species of animal; that the various species which formed the intermediate stages might have died off one by one as they gave place to the higher forms, so that no collateral descendants would have been left. In that case we should have clearly had one direct line of descent for man; and we should have been compelled to regard the animal stage as solely preparatory for man himself. We should, in fact, have had one parent stem, as it were, of the evolutionary hereditary tree of man, without any collateral branches.

A little consideration will now show that such a parent stem must, in fact, have existed, quite apart from any considerations as to the line of descent of the various species of animals which are with us to-day.

But biologists tell us that the real intermediate species which formed this parent stem of man's ancestral tree *have died off*; the animals as we have them to-day being very much modified descendants in collateral branches of these intermediate species belonging to the parent stem.

Man, for example, though so nearly related to the apes,

is not descended from them, but from some common ancestor ; the apes having only survived as a collateral branch.

Now let us consider for a moment, in the second place, that there does exist such a thing as *definitely directed evolution* ; such an evolution, for example, as we have already considered in the case of the horse, and which we have found it impossible to conceive of as a mere result of " natural selection."

Let us extend this principle to the whole physical evolution of man, and see in that a *definitely directed evolution*, effecting a gradual development and transformation from the original protoplasm—or even from the atom and molecule—to present-day man.

The energising *life* principle behind that definitely directed evolution would be operative in the primitive protoplasm—and earlier—and would produce present-day man as inevitably as the principle of *life* operative in the protoplasm of the germ-cell produces the individual man of to-day.

But if the pre-natal evolution of the individual is recapitulatory of the evolutionary stages of the Race ; and if we call the human embryo, *human*, even in its earliest or protoplasmic stage—and, indeed, make laws to protect it as such—why should we not call the whole parent stem of man's evolution *Human* at all its stages, right back to the primordial protoplasm ? The distinctive stage at which the *human* emerges must in fact be entirely artificial and conventional ; for it is *Man* who is evolving all the time, in the preformations of the race just as much as in the preformations of the individual.

But if we thus enlarge our conception of man's origin and descent ; if we call him *man* not merely when he reaches the stage at which we are now acquainted with him—and which, perchance, may appear very *animal* in the course of a million years or so—but throughout the whole process, from the very earliest forms of protoplasm : then we see that we must reverse the commonly accepted evolutionary relationship of man and the animals. For *Man*, being thus the parent stem of the Tree of Life, it is the animals which have evolved from Man, and not Man from the animals.

The present animals are, in fact, collateral descendants from the intermediate types which, in their definitely directed evolution, formed the direct line, or parent stem, of Man's descent.

Man *had* to evolve to his present point, as inevitably as the embryo must reach a certain stage in a certain time. And as inevitably as the embryo must follow a certain predestined course up to the period of birth, so also must Man evolve along certain lines in the fulfilment of his destiny.

If we could see the whole line of his evolution; if we could see what he *has to be*, as well as what he has been; the stages through which he has still to pass, as well as the stages through which he has already passed: how should we judge him in his present condition, how should we place him, as he is now, in relation to the whole process?

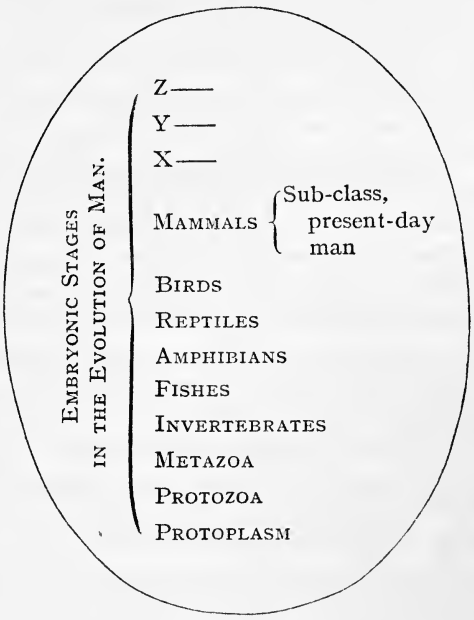
Is Man as yet so very much beyond the mere animal? In his physical evolution he certainly is not. There may be—we had almost said, there certainly are—strange developments yet in store for his physical body; such developments, indeed, that our descendants some millions of years hence may possibly be searching for *our* fossil remains in order to find the "missing link."

Physically, man at the present stage is a placental mammal; but what will he be in the course of a few more million years?

Let us add these future stages to our tabulated series on page 290, and write them X——, Y——, Z——. Let us also write the whole series as the evolution of MAN; each stage representing MAN at a certain stage of embryonic development, even as it does the individual.

In order to symbolise this, we might further enclose the whole in an ellipse—the symbol of an egg—this symbol being a most ancient and significant one, used to indicate the fact of transformation or transmutation of *substance* through the action of the indwelling informing *life*. It may be applied cosmically to the whole of Primordial Substance considered as the "world egg," the world substance, or "egg of Brahman," which, by differentiation and transmutation, becomes the manifested phenomenal Universe. It may be applied to a Nebula, out of the *Substance* of which a Solar System is presently evolved. It may be applied to a Planet, to an individual organism, or to a single atom—subjectively, the One Life ever at work *within*; objectively, a transmutation or evolution of outer body and form.

We may then write our series thus, condensing it somewhat :—



In, and out of, this great matrix of *matter*, which we call the physical Plane, Man is slowly evolving—to be born presently into a larger *cosmic* life and consciousness, of the nature of which we are not without information, nor even without actual present-day experience.

Let none think that in this process he can, as an individual, leave Humanity behind ; that one short incarnation will suffice for his own embryonic development in the matrix of matter ; or that he can separate himself from the Race to enjoy a " bliss unending " on a spiritual Plane which has no real connection with the great process of Man's evolution.

Each individual is assuredly part of the whole process *from beginning to end.* His individual life, indeed, is only a limited aspect of that Life which at root is One ; and his true *individuality* can, indeed, never be found so long as he clings to what he now—in ignorance of his real nature—understands by that term.

If we are to take Man as anything larger and nobler than " the beasts that perish," then we must take him as an evolution on higher Planes than the physical. We must, in

fact, take him as having within himself correspondences and affinities with all the Planes of the Universe.

Life has been defined as "correspondence with environment." Have we not ample evidence in the powers of mind and spirit which we already possess, that we are actually in touch with an environment which is infinitely more than that of our mere physical surroundings—ay, even to the Infinite Itself?

It is even that Infinite to which we now press forward, the inner intuition of which arises in man's heart in many and varied ways, expressed in science, philosophy, and religion. We press forward to a realisation in consciousness of a region at present invisible, inaudible, intangible to our embryo consciousness; but as certainly existent, and as scientifically demonstrable, as is the existence of the intangible Ether.

Nothing less than the whole Universe is our environment; nothing less than correspondence with all that the Universe contains can satisfy that inner impelling *power* whose outer mode and symbol is the evolution of body and form: whose inner nature is realised only in our own life and consciousness.

Creating and re-creating Itself in time and space, the One Life mirrors forth Its inalienable and inexhaustible nature. All that lives in consciousness reflects in its conscious life that One Life, as certainly as its body and form is built of the One Substance which, in its ultimate nature, is the mysterious garment and veil of the ONE REALITY.

Desire, effort, strife for powers not yet attained—perhaps even seemingly unattainable—such is the motive-power behind all evolution. But did Nature ever cheat this striving with a vain ideal? Can it really ever enter into the thought of man to attain the unattainable? The ideal may possibly be beyond the reach of the individual in one short life, but is it really beyond his reach in the illimitable future?

In considering the causes which work in evolution, let us not forget that *faculty* precedes organism. Organism moulds itself in response to the inner thought, desire, and will. Everything must be *ideal* before it can become 'real.' No organ of sight could ever have been evolved unless the *faculty* was first there—the power of seeing, the striving to see.

Is it the eye which sees? Is it the evolution of the *organ*

of sight, or is it not rather the fact that we have the power to see—a power which we are gradually learning how to use in ever larger and larger measure—which is the real fundamental fact? Psychical research shows us that *we* can see without the aid of the physical organ.

A certain measure of infinite faculty resides in each individual—expresses itself through each unit of consciousness. It is this which each individual uses, with greater or less effect, and in most cases for what he considers to be *individually* desirable. Place your ideal where you will: presently it will be realised. It will take substance and form, and become your environment and your fate.

In view of the foregoing we might legitimately outline some little part of the process of Man's evolution in the immediate future; bearing in mind in doing so, that the key must be a *psychological* rather than a physiological one. The outer is only the expression of the inner, and the real causes of Man's evolution lie in the inner garnered experiences, not in the outer "natural selection."

We find then, in the first place, that a very large portion of the activities of the individual have, in the course of evolution, sunk below the normal plane or level of consciousness, and occupy now what is very generally referred to as a *subliminal* region. All the automatic functions of the body come under this designation. They are assuredly part of the *self*, but we do not need to exercise any conscious control over them. Normally, if we are in good health, our body mainly looks after itself. Heart-beat, respiration, digestion, assimilation and repair of tissue do not require our conscious attention, though *they must have done so once*, long ages ago, when the organism was striving to acquire these powers.

From this lower subconscious region we rise to our normal level of awareness, to those activities of the *self* which we commonly control in our daily life.

Above this again we have that region of *supraliminal* consciousness—so mistakenly termed supernatural—towards which we are now striving, and the powers and possibilities of which we dimly perceive: just as the *self* at one time only dimly perceived the possibilities of powers which are now our 'natural' possession.

Here, then, we have apparently three stages or levels of consciousness. In our partial and limited method of viewing

them they commonly appear to be distinct and separate ; we do not regard them as parts of a Wholeness. They represent in consciousness the same kind of division or distinction which we make in matter between the various Planes. For example, we distinguish clearly between physical matter and Ether. Physical matter occupies the present field of our objective consciousness, whereas Ether does not. Yet they are one *substance*, and act and interact with each other in every single physical phenomenon. The apparent separateness lies merely in our individual consciousness.

But our individual consciousness, and the plane or level of that consciousness, is continually shifting its ground as the result of evolution. It is continually assimilating, as it were, more and more of the *supraliminal* region, and passing on to the *subliminal* more and more of its garnered experiences —to be materialised as organism, and dealt with instinctively and automatically.

In course of time this process must inevitably result in the ' natural ' occupying the field which is now commonly ascribed to the ' supernatural.' It must result, in the first place, in the shifting of our normal consciousness and activities to that region which we are now partially beginning to realise and understand in connection with psychical research. Ultimately it must be carried far beyond this, to a region which would be more appropriately termed spiritual—a region even now open to our consciousness, but only touched or understood, in its *natural* connection with the Whole, by a very few.

To that region men now for the most part look up for divine guidance, and offer thereto strange prayers for intercession and help. But when Man is full-born into the powers of his own divine nature, he will no more think of doing this than he does now in connection with the ' natural ' powers he has already attained.

That higher region is as much a part of himself—because a part of the One Self—as is the lower which he has already conquered. To enter in, and pervade, and energise, and move this physical material body ; to raise a finger, to lift an arm, to take a single step, is as great a *miracle* as any power which we may hereafter possess of telepathically communicating with our fellow-men, or of projecting the etheric-double to the remotest parts of this Earth or Solar System.

But as our consciousness and powers thus open out and

evolve to more and more complete correspondence with the subtle environment of the higher Planes of Primordial Substance: all that normally requires our constant care and attention at the present time will gradually sink into the subconscious region, and be done automatically at the *suggestion* of the higher-self.

In this aspect we have definite information and experience of the possibilities which lie in front of us, in connection with the phenomena of hypnotic suggestion and auto-suggestion.

Take, for example, a well known fact in hypnotic suggestion. If, while in the hypnotic state, it is suggested to a subject that at a certain time next day a certain act should be performed: that act will be performed automatically, even though the subject is then in his normal state of consciousness.

When, therefore, we have learnt the nature of our higher powers; when the normal consciousness of the self is functioning almost wholly on those Planes which are at present almost entirely subjective to us: it will be possible for us to suggest to our lower—namely, our present normal consciousness, which will then be *subliminal*—a certain line of action, and that action will then be carried out automatically, and without any further attention on our part. Should we, for example, want to go to any place, the mere suggestion to the body that it should go there will be sufficient, just as it is now sufficient in hypnotic suggestion: and we shall not need to direct consciously each step of the way as we do now. This auto-suggestion may be somewhat analogous to our present action on taking food. We take the food, and suggest to the body—though the suggestion itself in this case is now almost unconscious—that it should be assimilated: and this is then done, in a healthy body, without any further trouble.

Any real thought about such a simple matter as this of automatic digestion, or any of the other automatic processes which go on in our present bodies, will disclose the fact that what we can and do accomplish so easily now is as marvellous as anything which could ever happen in the course of evolution, or which we could possibly picture as to our future powers. The marvel, the eternal miracle, does not lie in the *degree* of the fact, but *in the fact itself*—the great fact of *Life*, with all that it means of thought, consciousness, idea, emotion, and —above all—*creative power*: the power to express *Itself* in objective form, to eternally *reproduce* Itself.

In this way, then, all our present normal activities, now associated physiologically with the substance of our brain, may in course of time become purely automatic; while the consciousness of the man himself has been raised to a power which we should now regard almost as a divine prerogative.

Physiologically, certain changes of bodily structure must follow this evolution or expansion of consciousness. What exactly those will be, it is impossible to say; but almost certainly there must not merely be great changes in brain structure, but also an enormous development of the sympathetic system, to which the automatic control will be gradually handed over: many of the present ganglia becoming the equivalent of the present brain. Profound modifications will also probably take place in the matter of sexual reproduction.

When this shall have resulted, there will doubtless still remain for the higher-self a field for illimitable choice and action; but so far as this lower world is concerned, the divine will—the *natural law*—will be done on earth, even as it is done in heaven—automatically, unconsciously, freely, joyously, with no more hesitancy or conflict than the heart-beat of a healthy body.

The key to Man's evolution is his oneness in inner nature as well as in outer form with that Great REALITY which Is the Universe.

Whatever may now be our conventional ideas as to the nature of Man, derived only from what we know of him on the physical Plane at the present stage of his existence; as one hardly yet emerged from the mere physical struggle for existence of the earlier stages of his great cyclic progress; as one only just commencing to realise his higher mental and spiritual nature; or, in rare cases, as one who has attained to sublime heights of conquest over matter and the illusions of the senses: we are compelled, in view of the deeper principles we have just been considering, to postulate that Man lays claim to his future heritage of divinest powers and immeasurable fulness of life eternal, by virtue of this same evolutionary process by which he has reached his present powers; this same *cosmic* process in which he must play his part from beginning to end; and which, traced back to its source, or forward to its goal, can only be accounted for in the One Divine Life which lives and moves in ALL.

Men are not MAN; yet even so, each individual must become not merely *a* man, but MAN. MAN was, is, and will ever be *divine*; even though for the time he may play the part of the prodigal son. And although the reason for his "fall into matter" is now hidden from us, most assuredly that also must be a necessity of his divine nature.

The fall of Adam implies and carries with it inevitably the resurrection of Christ; for "as we have borne the image of the earthy, we shall also bear the image of the heavenly"; or, as Plotinus of old wrote: "Surely before this descent into generation we existed in the intelligible world; being other men than now we are, and some of us Gods; clear souls immixed with all existence; parts of the Intelligible, not severed thence; nor are we severed even now" (*Enneades*, vi. 4. 14).

CHAPTER XIV

THE EVOLUTION OF THE INDIVIDUAL

" This has often come upon me . . . all at once, as it were out of the intensity of the consciousness of individuality, the individuality itself seemed to dissolve and fade away into boundless being, and this not a confused state, but the clearest of the clearest, the surest of the surest, utterly beyond words, where death was an almost laughable impossibility; the loss of personality (if so it were) seeming no extinction, but the only true life."—*Letter from Lord Tennyson.*

CHAPTER XIV

THE EVOLUTION OF THE INDIVIDUAL

"IF a man die, shall he live again?"

Such is the supreme question which man has been asking in all ages, and still asks; has been asking and answering again and again; the question to which the whole of history discloses the ineradicable response in man's own heart and conscience—the decisive answer, YES.

Yet many have doubted and questioned; and even despaired and denied. Many have demanded *proof*, and have not obtained it; others have not demanded proof, yet proof has been given them abundantly.

Some are satisfied with a traditional faith or belief, with a reputed historical fact that "one rose from the dead." To others this is wholly inadequate, not merely as being unprovable tradition, but also on the very basis claimed for it as being a unique or supernatural occurrence, and, as such, wholly valueless as an explanation of the *natural law* of all human life in its relation to the spiritual world.

Our task here, however, is not to analyse historical evidence, nor even to consider the adequateness or otherwise of the many historical forms which the belief in man's immortality has assumed in various ages. In each age, in each race, in each individual, the question is asked and answered in its own special manner, according to the knowledge available.

What we have now to do, therefore, is to answer the question in terms of the fundamental principles which, in our previous chapters, we have endeavoured to elucidate and establish on a sound scientific and philosophical basis; to answer the question in terms of universal principles applied to the individual or particular.

If man lives again—or rather, if he never dies—he does so in virtue of, and in harmony with, *cosmic law*; in harmony with principles which our ever-increasing knowledge shows us

to be constant, continuous, uniform; and operative in the microcosm as well as in the macrocosm.

If man be immortal, he must be so because of his own inalienable nature; and no historical event can in the slightest degree determine or effect his immortality. Historical events are not the *cause* of man's destiny; they are the fulfilment thereof.

Our first and fundamental principle is that of the Unity of the Universe; the principle that the whole Universe—unseen as well as seen—is the expression, the activity, the *Life* of One Infinite BEING.

Life and Consciousness, therefore, are eternal and indestructible. The outward and visible symbol of the existence of this Eternal Noumenon is Substance and Motion. The inner witness is Life and Consciousness Itself, of which we all partake.

But though Life itself cannot perish, yet perchance that which we know as the individual may do so—merged as it were, when the form disintegrates, in the Infinite Ocean of Life.

If, indeed, the law of cycles be such that sooner or later the whole phenomenal universe must vanish, merged once more in the Absoluteness of Primordial Substance out of which it is differentiated; if "all the hosts of heaven shall be dissolved, and the heavens shall be rolled together as a scroll; and their host shall fade away"—then, indeed, must that which we now know as the individual self also vanish; merged in that One Self from which it is in reality never separated. For assuredly the individual self is only a time phenomenon; it is the One Self seen or known partially and incompletely.

But though the ultimate consummation of the great cosmic process which we name *evolution* would appear to be a far distant event in the history of the individual man, and even of the history of the whole race—or still more so of the Solar System—yet none the less we must clearly realise that this great cosmic process only exists for or *in* the individual consciousness; it only exists in those *limitations* which constitute the individual. In reality there is no time process, but only an eternal Here and Now; so near to us that we might, as it were, stretch out our hand and grasp it, and make it our own—so near, and yet so far.

And when the individual has grasped it, behold! he is

no longer an individual; for he has dropped the limitations which make him such; he has lost himself, yet found Himself, for he now knows his true Self to be none other than the One Self.

While, however, we need to keep in view continually this fundamental unitary principle; while we are compelled to postulate an Absolute Noumenon as the true basis of all life and consciousness, as well as of all phenomena; and while this principle must thus be the centre and focus of all science, of all philosophy, and of all religion: we must also formulate our knowledge in terms of our present limited or individual consciousness, and deal with the evolutionary process in relation thereto as if it were a concrete reality.

For us as individuals there does exist an evolutionary process; and between ourselves and the final consummation of that process lie ages of phenomenal existence, in which smaller cycles must run their course and disappear, merged in the larger ones to which they are more immediately related; whilst these latter must in turn be absorbed in something still more cosmic or universal. The physical Plane must be redissolved in the etheric; the etheric in the mental; the mental in the spiritual; till all that is individual and phenomenal is once more merged in the one Absolute, from which—as time phenomenon—it originally emanated, and to which it must therefore inevitably return.

The larger cycle, then, to which the individual human being belongs, or is more immediately related, is that of Humanity as a whole; a cycle which we have already found it necessary to consider, even from an organic point of view, as constituting something *unitary*; a definitely directed evolution producing *Man* from some primordial form of Substance.

But the outer phenomenon is only the hieroglyph or symbol of the inner Noumenon; and it is that Noumenon, the Spiritual or Divine Man, which we must consider as the energising, vitalising principle at the root of the whole cyclic process which constitutes the evolution of Man; an evolution which, however, must be an *involution*, a descent into matter, or phenomenon, before it becomes an *evolution*; and which, as such, must be operative on the higher Planes before it becomes materialised on the physical.

We may postulate, therefore, one unitary Principle or

Noumenon of Life and Consciousness constituting Man, and standing in the same relation to the whole cycle of Man's evolution, as the one Absolute Noumenon does to the whole Cosmic Process. Cosmically, this unitary Being or Logos will be the informing or energising Principle in the whole evolution of our Earth. It is the vitalising principle within the cosmic germ-cell of matter or substance which—as we have already seen in our last chapter—produces the race of Man through lower organic forms as inevitably as the individual man emerges from the individual germ-cell.

It is necessary that we should clearly define and understand this distinction between Man and men; between the inner spiritual Principle which is One, and the outer manifestation which is *many*, if we would understand much which is otherwise dark and mystical in many ancient scriptures and teachings.

Thus in terms of Christian (esoteric) doctrine, this unitary Principle, or Logos, is the "Divine Son," the *Cosmic* Christ of St. Paul, "who is the image of the invisible God, the first-born of all creation; for in him were all things created, in the heavens and upon the earth, things visible and things invisible . . . *and in him all things consist*" (hold together) (Col. i. 15). "All things were made by (through) him; and without him was not anything made that hath been made. In him was life; *and the life was the light of men*" (John i. 3).

In the same way, therefore, that the One Universal Noumenon appears to us to break up or individualise into an infinite variety of forms which go to make up the phenomenal Universe, while at the same time we are compelled to postulate that this is not so in reality, that the Noumenon always is and always must be ONE: so we must conceive that this Divine Being which is MAN, manifests itself phenomenally as an involutionary and evolutionary process; repeating or reflecting thereby the universal process, and being thus "the image of the invisible (incognisable) God"; the ever-concealed Absolute Noumenon.

On the highest spiritual Plane, then, that which 'down here' becomes *men*, is MAN, the "Divine Son"; and the relation of individual men, of *ourselves*, to this supreme Logos, will be precisely that which we should postulate in any scientific or philosophical concept of the relation of the particular to the universal. In consciousness there is an appearance of

separation, of time and space phenomena ; in reality there is no such separation ; it is the One Life which operates in All.

All great teachers, from the very earliest ages, have consistently taught this doctrine ; have taught that man's true life is derived from, and one with, the larger Cosmic Life—whatever *name* may be given to that great cosmic fact. They have also taught that this true inner indestructible *life* can only be realised by the individual in proportion as he abandons all attachment, by hope, fear, or desire, to outer temporary or phenomenal forms.

But we may now ask how—if all individual life and consciousness is in reality the One Life and Consciousness—we, and all other individual forms, have lost the realisation of this oneness ; how in fact, consciousness, as such, can ever lose its essential and inherent oneness ; how we apparently see infinite *degrees* of consciousness ; and how we ourselves may even doubt whether our life and consciousness will survive the disintegration of the outward physical form ?

In answering these questions—or rather in endeavouring to form some dim concept of the nature of limitation or nescience—we must bear in mind, in the first instance, that what we know as consciousness is a *how*, and not a *what*. Consciousness implies a relationship of subject and object. Without the complementary object there can be no such thing as consciousness as we understand it ; Absolute consciousness is unconsciousness.

Consciousness, then, together with its correlative phenomenon, is *how* the One Noumenon is known ; or *knows Itself*. In Itself and by Itself this One Noumenon is incognisable and unknowable. That is obvious, because a thing is known only by its opposite, or by relation and contrast ; but in the Absolute there is neither opposite nor contrast.

But, in a certain sense, an infinite *One* necessitates an infinite *many*. To be infinitely known or cognised, the infinite Subject demands an infinite Object ; or rather, an infinity of objects (phenomena). The Infinite must know Itself in an infinite variety of ways.

In the second place, let us consider how we as conscious individuals do actually make use of our consciousness.

A little reflection will show us that our consciousness is for the most part directed *outwards* ; it is almost wholly

engaged with objective phenomena. Do we not, indeed, even take these phenomena to be *reality*, and live our life wholly therein; striving even to grasp and *possess* these fleeting shadows which we *know* must pass away?

This fact, then, which we find in the individual, may perhaps give us a clue to something similar operating in the universal; and — inadequate as any such concept must necessarily be—we shall at least have something not wholly inconsistent with our present knowledge and experience.

Conceive, then, of the LIFE, the ceaseless activity of the One Noumenon, as being essentially of the nature of Self-realisation by means of a creative process, which consists fundamentally in the objectivisation, the outward presentation as phenomenon, of the Infinite contents of the One Self.

In this view we cannot conceive of this *creation* as an act whereby something which is a *not-self* is brought into existence. We must rather conceive that the One Self cannot help, as it were, the eternal expression of Itself by a process whereby It sees and knows Itself as Phenomenon as well as Noumenon, as Object as well as Subject; a process, in short, which is the eternal *realisation* or *expression* of ITSELF.

It is precisely this self-realisation which constitutes our own life; which constitutes all individual life. Between consciousness and phenomenon there must always be an exact parallelism, however much we may limit consciousness, or in whatever individual forms we may locate it. The outward, the objective, the visible, is ever and always the expression, the symbol and sign of an inner, subjective, invisible *self*.

The outer phenomenal universe, then—infinite as the complement of an infinite subjective SELF—is not in reality the not-self. The One Self is in reality both Subject and Object, though the individual self is not; and the outer phenomenal aspect of this essential Unity can only be considered as a Not-Self by an arbitrary limitation or negation of the real nature of the Self; a limitation, illusion, or nescience, characteristic of all individual forms of consciousness as we at present know them.

Let us conceive, then, that the Consciousness of the One Self, the Universal Consciousness of Primordial Substance, entering in, as it were, or associating Itself with those individual forms which are the presentment of Itself to Itself: loses in those forms Its sense of Oneness or Unity; identifies

Itself for the time being wholly with the form ; and regards all other forms as the Not-Self. This entering in—which will correspond with the actual creation of the forms—will constitute the *involutionary* cosmic process, the formation or emanation of the phenomenal universe. The reverse, or *evolutionary* process, is the gradual repudiation by the subject or self of the self-imposed limitation.

Thus the great heresy, the great illusion, is the sense of separateness ; while, on the other hand, the great secret of life, the great religion, the elixir, the philosopher's stone, that which frees the individual from all illusion, from all bondage, that which " brings immortality to light," is the realisation of oneness with the Infinite Divine Life which lives, and moves, and is conscious in ALL.

From our own individual nature we thus obtain some hint, some dim conception of the nature of the great Cosmic Process : on the fundamental assumption that the universal is reflected in the individual and particular.

We may thus conceive of the Cosmic Process—as a conscious act on the part of the One Self—to be particularised as follows : (*a*) A presentation of the contents of the One Self as objective form or phenomenon ; this objective form being the natural and inevitable accompaniment of every act—or rather of the ceaseless action—of the One Self; which eternal activity is known to us as *motion*. (*b*) An entering into, or identification of the Self with particular objective forms or phenomena ; an affirmation, " I am this, and this " ; constituting the *involutionary* or limiting process. (*c*) A negation of the previous affirmation ; a self-realisation that the Self is infinitely more than this, or this ; that the Self is not limited or conditioned by any forms or phenomena, but is the *cause* of these forms, and can create or repudiate them at will. This negation or repudiation of form and limitation constitutes the *evolutionary* process, which is essentially an expansion of life and consciousness.

The individual self in its evolutionary progress realises itself in ever larger and still larger relation and proportion ; till ultimately it realises itself as verily the One Self. If our fundamental conception as to the unity of Life and Consciousness is valid, it is clearly to be seen that the sense of individualisation, of separateness from other selves, is an illusion : no such separateness existing in reality, but only in appearance,

according as consciousness identifies itself more or less clearly with individual and limited forms.

Such identification of ourselves with individual physical forms, more particularly with our physical bodies, is that which gives us our conventional and limited ideas of the nature of life and consciousness; and we commonly attribute to others an individual and separate I-ness such as we ourselves experience.

But what, indeed, is this same I-ness, this sense of *self*, save the one inherent unique quality or attribute of Consciousness Itself; of *Being*, which knows itself as *One*?

By no possibility can I think of myself as two, or as many; the I-ness must always be unitary; and what I thus think of myself, so does all life and consciousness everywhere, in every form. Are there, then, many selves; or shall we still adhere to our fundamental Monism?

Further, by no possibility can I—or any other I—ever think of itself otherwise than as existing *at the centre* of the universe. Is not this also the inherent or unique quality or attribute of Consciousness Itself; of that which knows Itself not merely as One, but as ALL?

For the SELF, as cause of All, verily IS that centre; and in consciousness can never be otherwise. Only—that centre is everywhere, and the circumference nowhere.

> "Where it cometh all things are,
> And it cometh everywhere."

Consider also that Consciousness being One and Universal, that which now appears to us to be a separate unit or self, as associated with some phenomenal form, must ever retain its sense of I-ness or selfhood even when—by reason of the disintegration of the form—it becomes merged in some larger unit. However large, or however small in our present estimation may be that unit which at present we conventionally call 'I': it must always be 'myself,' even when it has expanded to include the whole Universe. We cannot conceive of the sense of self as being lost, though we can conceive of the sense of *separation* as disappearing; and herein is the saying true, that "he that loseth his life shall find it." For it is only by losing the present personal self, the personal attachment to forms and formulas, that we can find that larger Self which lives and moves in ALL.

In thus losing what we now falsely regard as an individual separate self, we must, therefore, realise that our true selfness will ever grow stronger and more real. There will be no further fear or question as to whether when 'we' die, when the phenomenal form perishes, 'we' shall continue to live.

Life is universal and omnipresent; inherent in the omnipresent Primordial Substance. But even as any portion of this substance, considered as an *object*, may be conceived of as subdivided to infinity—yet must each portion, however small, retain *all* the attributes, the inalienable *nature* of *Substance* as such—so also, considered in its *subjective* aspect as Life and Consciousness, the one Self—in reality as indestructible as Substance itself—by attachment to phenomenal forms, by limitations or modes of consciousness which we call *time* and *space*, may conceive itself as individual and conditioned—even to an infinite degree.

On the other hand, it may—nay, it must—expand until "the universe grows I."

Our working theory of life, based upon the foregoing considerations, and upon the fundamental principles disclosed by philosophy and science, will now be seen to be simply that of the individualised consciousness, self, or Ego, gradually freeing itself from the limitations of phenomenon, form, or *matter*—the *objective* pole of the dual aspect of the ONE, considered as something separate, or existing as a reality by and in itself—and realising its own infinite nature as the *cause and producer of phenomenon*.

The individual self, seen in *all* its relations and proportions, is really the One Self, which experiences, knows, suffers, rejoices—or, in one word—*lives* in ALL.

In *exoteric* religions, man fears and worships this Divine source of his being as a *personal* God, to whose presence he may perchance approach as he would to that of some earthly potentate.

But the Infinite can never be really thus approached. It must always remain at an infinite distance when conceived of in terms of time and space.

"While we are approaching God, we never come to Him," says Eckhart the Mystic; and in all true Mysticism, in all *esoteric* religion, it is the *oneness* of the individual self with the Universal Self which is realised and taught.

Thus man lays claim to his immortality, not as phenomenon,

but as Noumenon. Man the phenomenon is not immortal—that is the empirical fact of our everyday life. Man the Noumenon, the *cause* of man the phenomenon, *is* immortal; because he is that Infinite Life which, as the eternal Root of ALL, is also the One Reality, the "thing in itself," though not any thing as a thing.

Of this One Reality it is impossible for us to conceive otherwise than that IT is eternal, imperishable, and unchangeable.

But between individual man and the full realisation of his true divine nature there appears to lie a long evolutionary process. Man is the Pilgrim of the Universe. Why or how he set forth on this pilgrimage we do not know; we have only obscure allegories of a "fall." Yet since he is a "divine Son," that pilgrimage is certainly the embodiment of a Divine Idea, which, as such, must in fact belong to the very nature of Divinity Itself.

We may now, therefore, ask ourselves, in view of these fundamental principles, what may be the immediate destiny, the cycle of evolution, which lies immediately in front of the individual man, in front of *ourselves*?

In physical science we find that we must fall back upon the etheric Plane for the inner energising principle and cause of all physical Plane phenomena. The etheric Plane literally *ensouls* the physical; and it is to the energies and activities of that Plane that we must look in the first instance, not merely for the force which builds up physical matter, which unifies and holds together the *corpuscles* or *electrons* of the physical atom, but also for that unifying and co-ordinating principle which *ensouls* and makes a unitary economy of every *organic* form on the physical Plane.

As to the nature or action of this etheric unifying principle, considered as an individual soul (Haeckel's "cell soul") in the lower organic forms and animal kingdom, we need not attempt to make any guess here. We know nothing scientifically about it; and when science has discovered the unifying principle, the *positive electron*, in the physical atom, it will be time enough to pass on to that of the compound molecule, and from that to the lowest forms of organic life. That is the scientific method, though there is a Higher Science by which these things may certainly be known—may be known from *above*, or from *within*; by developing within one's self the power

to know, instead of constructing mere physical apparatus with which to experiment.

It would appear to be quite legitimate, however, on the basis of what we already know, to conceive of this informing or organising principle as being *cosmic* in its nature, rather than individual, in the lowest forms of life; becoming individualised—that is to say, as associated with individual physical forms—only at a later stage of evolution.

But the case is wholly different as regards ourselves; where we can study at first hand our own powers and constitution. Here we are already in a fair way to a complete scientific recognition of the fact that man undoubtedly possesses a definite subtle, etheric, or psychic body, which under certain conditions can, and does, operate quite independently of the physical organism and faculties.

The proof of this is to be found in innumerable works dealing with the various branches of the comparatively new science—new, that is to say, to modern science—of psychical research, to which some of our most eminent scientists the world over have devoted many years of patient inquiry and experiment.

The net result of the knowledge attained at the present time is the establishment of two facts of the utmost importance in their bearing upon the principles we are now advancing.

The first of these facts is the discovery that, within or behind the normal consciousness of man, there exists a vast subconsciousness, or *subliminal* consciousness, which usually reveals itself only under certain abnormal conditions, or in states of hypnotic sleep, trance, or ecstasy.

The content of this subliminal consciousness is practically unfathomable. Knowledge utterly lost to the physical memory, or which has never been registered at all in the experience of the normal man, will *come through,* as it were, under these abnormal conditions. It is as if there existed a sort of *surface* between consciousness and the objective world, such as we might symbolise by the surface of the ocean. Between that surface and the outside world there is a constant action and reaction, throwing the surface into waves and vibrations which constitute the normal waking consciousness of the individual.

This normal consciousness being thus occupied with *outward* phenomena, with sense impressions coming from the

objective world, is almost wholly on the surface of the ocean. But let consciousness be withdrawn from the outward sense impressions—as is done in sleep, or in natural or induced trance—and it falls back upon its deeper connections, upon the more interior planes, where it must necessarily always exist in some appropriate form of Substance; which, indeed, must be said to be its more natural and appropriate habitat, and where its powers or characteristics are such as are usually termed abnormal, miraculous, or even supernatural.

The second fact which modern psychical research has clearly brought to light and demonstrated, is that of thought transmission or *telepathy*; the intercommunication of mind with mind independently of the usual channels of communication, or of the distance separating the two individuals who are thus communicating.

More than this: it is even claimed by some of the most advanced scientific investigators that telepathy is not merely operative as between two or more physical individuals, but that it may also, and indeed does, take place between incarnate and discarnate minds; between individuals still living in a physical body, and those who have dropped that body and passed beyond the ken of our normal senses. There are a large class of so-called "spirit communications" the fact of which is undeniable, and which it is now sought to explain on the principle of telepathy.

In our next chapter we shall deal somewhat more fully with the question of psychic phenomena; what it is necessary to point out here is simply this: each and all of the facts which psychical research brings to light—which are, however, only very old facts, recognised and clothed in more modern scientific terminology—necessitates the possession by the individual man of a definite organism, body, or vehicle of consciousness on the higher Planes of Substance; and, once this has been recognised as a scientific necessity, all question as to the survival of the individual *soul*, after the disintegration of the physical body, is at an end.

Nothing less than this is, in fact, the result already claimed by some of the most prominent investigators in this comparatively new branch of modern scientific research. This claim is fully set forth in the epoch-making work of the late Frederic W. H. Myers, of Cambridge, on *Human Personality and its Survival of Bodily Death.*

When we consider the nature of the *subliminal* consciousness—which modern science has rediscovered—in the light of our fundamental and universal principles, it is readily seen that the *ocean* of consciousness to which we have referred, and to which the subliminal may be compared, is, in fact, none other than the ocean of Primordial Substance considered as a substrate or vehicle of the Universal Consciousness: of which every individual consciousness must necessarily be a portion, aspect, or mode, a mere *wave*, which is different in form but identical in substance.

When we disintegrate or dematerialise *matter*, we pass back from Plane to Plane; the matter of one Plane is resolved into the substance of the next higher—*substance*, that is to say, as considered in its relation to the next lower Plane, but *matter* on its own Plane, when considered as something *objective* to consciousness on that Plane. This disintegration or dematerialisation is simply the breaking-up of *form*; it is, as it were, the stilling of the waves; motion ceasing *as individual motion*, but only because merged in some larger cosmic whole.

We might compare the gradual disintegration of physical Plane matter to the melting of the foam on the crested waves of an ocean lately storm tossed, but now subsiding. Gradually the white crests of the waves disappear, and the smaller ripples themselves are merged in the larger undulations; while later, these also disappear, leaving only a long rolling swell; the last cosmic form on the infinite ocean of Primordial Substance.

But these also must finally disappear; these, which are the great Cosmic Powers and Gods; the "First and the Last" (in time and space) of the cyclic manifestations of the ONE—these also must disappear, as the great ocean once more sinks to rest in the motionless motion of the One Absolute.

And even thus must it also be with consciousness, since all objective forms are but the correlative or complement of states of consciousness. The individual consciousness is never other than one in *substance* (in that which *sub-stands*) with the Universal Consciousness; and the deeper the individual penetrates into his own nature, the more must he find and realise that it is deep as the Infinite Itself.

Matter never *becomes* other than what it always *is*—Primordial Substance. So also Consciousness never *becomes* other

than what it eternally *is*—the subjective aspect or attribute of Life, Motion, Being.

Consciousness is inherent in all forms of matter, simply because all matter, on whatever Plane, *is* Primordial Substance. But in those forms or modes of Primordial Substance which we know as physical matter, consciousness is not necessarily present in a form in which we can recognise its activity. If we would find the consciousness of a mineral, we must penetrate into the inner recesses of the atom and molecule. The consciousness of the mineral is not active on this physical Plane; neither is consciousness individualised in the mineral in the same sense in which we apply that term to ourselves; the individual form of the mineral on the physical Plane does not represent an individual form of consciousness, an individual Ego. The mineral—or, in general, physical matter—represents a *cosmic* form of consciousness, which is only individualised at later stages of evolution.

Our *subliminal* consciousness, then, is deep as the depths of Primordial Substance Itself; but between that highest Plane of all—where all that is individual must necessarily disappear, merged in the infinite ocean itself—and our present Plane of consciousness—where individualisation appears to be most marked—there would seem to be many intermediate Planes, where consciousness—like forms of matter—will still be found more or less individualised: albeit with extended powers and characteristics which grow ever larger and more divine as each intermediate Plane is transcended.

Some glimpse of the nature of these larger powers, some foretaste of what man might *be* in the power of his divine nature, is now beginning to be apprehended in modern culture and scientific investigation.

What, then, in harmony with our fundamental principles, may we reasonably postulate of the history, fate, or destiny of each individual subject or self; of that individualised form or aspect of consciousness which we conventionally call ourselves?

In the first place, that destiny must necessarily be evolutionary even up to the highest point at which we can conceive of the individual as falling short of absolute identity with the One Noumenon. Even the destiny or history (the time and space aspect) of the One Divine Man (Humanity, the "Divine Son" of the "Father") is evolutionary. He was

created "in the beginning," "in the image of God"; and there will come a *time* when "all things having been subjected to him" (all things having run their evolutionary course) the "Son" also himself shall "be subjected . . . that God" (the One Noumenon) "may be all in all" (1 Cor. xv. 28).

Short, then, of this final "subjection," all is evolutionary; and the evolutionary process, we have already seen, is a cyclic one, in which smaller cycles run their course, and are merged in larger ones; while these also, in course of time, return to something more cosmic or universal.

If, then, we conceive of Humanity on the highest or spiritual Plane of Substance as being *One*—One Cosmic or Divine Potency or Noumenon, which, as such, has its own distinct evolutionary cycle of cosmic magnitude—we may legitimately ask ourselves, at what point, or on what lower Plane does that One assume the aspect of the many; at what point does it become—in appearance—the lesser individual selves or Egos which we realise as ourselves?

Now we have experimental evidence in psychic phenomena that we do possess, at least on the next higher or etheric Plane, a definite *body*; that we are, in fact, *individuals* on that Plane, very much as we are on the physical Plane. As to how many Planes may really exist between the physical and the highest spiritual, we have no evidence; but we have found it necessary to postulate at least four cosmic Planes lower than the ultimate Plane of undifferentiated Primordial Substance—which, strictly speaking, is not a Plane at all—and we have termed these four Planes, the spiritual, the mental, the etheric, and the physical.

If, then, we place the unitary Divine Man on the spiritual Plane, it would appear to be reasonable to postulate that on the next lower, or mental Plane, this one Noumenon of all Humanity might be individualised into something which would more nearly correspond to what we could conceive of as our own spiritual self or Ego.

Where empirical knowledge is lacking, we must fall back upon correspondence and analogy; and if we have grasped the universal principles already deduced from our empirical knowledge of nature, it will readily be seen that a mere lack of detailed knowledge or classification does not affect in the least the fundamental principles. We may alter our classifi-

cation from time to time, as our knowledge of details grows, without affecting the fundamentals themselves.

It will be found, therefore, highly advantageous at the present stage of our knowledge to assume as a working hypothesis that man possesses a definite body or vehicle on at least one Plane higher than the etheric ; that, in fact, he possesses a definite *mind body* ; that his mental activities are associated with a definite and individualised form of Substance on the mental Plane. So near, however, is this Plane to the spiritual, that this mental body might almost be considered to be the spiritual Ego ; for on its own Plane its powers will certainly transcend, even to a divine degree, those which we have so far learnt to associate with *ourselves*, ' down here.' We should, for instance, have to conceive that on that Plane *telepathy* would be the normal mode of communication between individual Egos. What was present in the consciousness of one would be present in the consciousness of all ; and the limitations which so sharply divide ' you ' and ' I ' on this lower physical Plane would have wholly disappeared.

It is evident, however, that whatever may be the nature of the individualisation, on the mental Plane, of the higher Spiritual Noumenal Man, that individualisation will be different at the end of the evolutionary cycle to what it is at the beginning. In some way or other the process is *necessary*, and the only way in which we can conceive of that necessity—outside of the fundamental necessity that *subject* can only realise itself as *object*—is based upon our common experience that the Ego grows, expands, *becomes*, by experience in phenomenal forms. The cycles of evolution are, for the subject or self, cycles of experience.

How, then, may we legitimately assume the evolutionary cycle of the spiritual Ego to run ; what is its association with those lesser cycles which are our *personalities* on the physical Plane ?

Each higher Plane, existing before, during, and after the evolution of the Plane or Planes below it, must necessarily have a much more extended existence in time. It stands in the relation of Noumenon to the lower Plane ; its own Noumenon being still higher.

And as it is with the Planes as a whole, so must it be with the individual forms of existence which may act from the higher to the lower Planes. Man, considered as a spiritual

being, *comes down* into incarnation; and returns, plus the experience he has gained, to the Plane of his true self, where his individual cycle of existence may well be of such an extended nature as to appear, in comparison with our brief physical existence, to be eternal.

Yet nothing in *time*—nothing even in *infinite* time—is eternal; nothing outside of the One Absolute Noumenon. In the Hindu cosmogony it is taught that even Brahman is not eternal. Brahman himself must be absorbed in the Absolute (Parabrahm), when the great cosmic cycle or Mahamanvantara has run its course. We have already seen that the same teaching is to be found in the Christian Scriptures, in the idea that the "Son" himself is finally "subject to him that did subject all things unto him, that God may be all in all."

We find, then, by correspondence and analogy, and proceeding from universals to particulars, that the whole cosmic process, considered as phenomenon, is the field of experience of the One Self; that the whole evolutionary cycle of Man—of which the mere physical history of this globe is only a very small portion—is the field of experience of some individual Cosmic Being, which has been termed the Divine Son or Logos; and that the various physical personalities and individual lives which 'we' live down here, are part of a certain larger cycle of evolution through which the individual spiritual Ego has to pass.

We may note, then, in the first place, that the spiritual Ego—as the informing principle, or real *self* behind or within the temporary personality—must necessarily pre-exist that personality. The spiritual Ego comes down into incarnation, or is the noumenon or cause of the physical personality, in just exactly the same sense as the One Noumenon is the informing principle or cause of the whole phenomenal universe, and 'comes down' into matter in thus emanating or producing it; being, in fact, *immanent* in it, while also remaining *transcendent* thereto.

In the second place, we may note that, so far as the individual Ego is concerned, this coming down has to take place alongside, as it were, or in conjunction with other cycles or cosmic processes not directly connected with the individual Ego. The individual Ego, for example, does not 'create' the matter out of which his physical body is built. The evolution of that matter belongs to a larger cosmic process with which

he is not directly connected. Neither does he 'create' his own physical body; that also is prepared for him by a certain lower order of evolution; and mere physical heredity must be considered in that respect as almost on the same level as matter itself, *i.e.*, as something *with* which the Ego has to work, and *by* which the real nature and powers of the Ego are largely masked and limited.

But when we come to the real man, to the individual *character*, to the powers and *genius* which exceptional individuals exercise, and which, being possible for one, are possible for all; when we consider the latent powers in man, the nature and powers which the *subliminal* or *supraliminal* self is capable of manifesting: we find that we are dealing with something which continually transcends physical limitations and physical laws; with something, indeed, whose whole effort, whose whole evolution consists precisely in a struggle to transcend mere material conditions; with something which realises itself as superior to these, though for the time being held in bondage thereof.

Perhaps with the vast majority of individuals, who have not yet realised the nature, powers, and possibilities of their own higher-self, it must be said that they are almost wholly creatures of circumstance; they are almost entirely dominated by hereditary tendencies and environment.

But if one man may be a genius, rising out of the most adverse circumstances by sheer force of the divine power within him: all may, nay, *must*, in virtue of the evolutionary process, become so also. If one man may conquer the world, the flesh, and the devil: all men may, nay, *must* do so; if one man may be a Buddha, or a Christ: all men may, nay, certainly shall be, even what the highest and noblest have already attained.

How, then, may they accomplish this? If the genius, the saint, the Buddha, the Christ, as higher types of men, show us the direction in which the evolutionary process is taking us—even though between such as these and the average mortal there may appear to be a great gulf fixed—how shall we, the average mortals, reach the heights to which these have already attained; how bridge the gulf which apparently separates them from us; how realise as they have realised the higher powers in man which can give victory and supremacy over all material conditions and limitations?

If evolution means anything at all for the individual, it means precisely this conquest of matter—in which relation the term *matter* may stand for three things, (*a*) actual physical matter, the material conditions by which we are now limited and conditioned; (*b*) material or worldly desires and illusions; (*c*) the prime illusion that the objective or phenomenal world is a 'thing in itself,' that it is a 'reality' existing apart from and independently of Life and Consciousness.

The conquest of matter means, that the individual shall rule where at present he is a subject, and even a slave. He must rule first in the kingdom of his own body; and ruling thus in his own body he shall find the world, nay, the universe, at his feet.

Now we cannot dissociate the evolution of the individual from the evolution of the Race as a whole, at any stage, or on any Plane. The Race as a whole must evolve through the perfecting of the individual. The Ego belongs to the whole history of Humanity, and must partake of the whole evolutionary process in all its phases—spiritual, mental, etheric, and physical.

But we have it before us as an empirical fact that individuals stand at vastly different points in the scale of evolution, in their capacities and powers, mental, moral, and spiritual. How, then, did those who are immensely in advance of the average acquire their higher powers; where has the Ego accomplished the evolutionary process which must have been necessary to result in these higher powers?

There is one theory, and one theory only, which can give any adequate reply to these questions, and which at the same time connects the individual man with the whole evolution, progress, and perfecting of the Race.

That theory is the one commonly known as the theory of Reincarnation. It is the oldest philosophical and religious concept in the world as to the relation which subsists between the evolution of the Ego, and the evolution of the Race; between the permanent spiritual man, and his temporary manifestation on the physical Plane as a human personality.

We have already seen that the spiritual Ego, as the informing principle of the human personality, must necessarily pre-exist; that it 'comes down' into incarnation. The ordinary Western conception of this matter—derived from the teachings of dogmatic Christianity, so long imposed upon the Western

World by ecclesiastical authority — is, that the soul or individual has no pre-existence. The individual commences his *eternal* career at the moment of physical birth ; he has no past existence, experience, or evolutionary history ; nor is his present character, or his capacities, powers, or opportunities, in any way dependent upon what the individual himself has done or experienced in the past.

Notwithstanding that the individual is thus supposed to commence his existence at a certain definite *time*, he is popularly supposed to continue to exist for ever and ever. We need not here consider the further teaching that the *state* of the individual, in bliss or the reverse, is also definitely fixed after one brief life on this Earth. Such a conception belongs only to the lowest phase of religious dogma, and its utter absurdity is now very generally recognised in the Christian Church itself, notwithstanding that it still prevails in some sects, and is taught in the Church of England Prayer Book.

But in truth the idea that anything individual can commence in *time* and yet be eternal in the *future* is only one degree less absurd than the supposition that a man's future state is determined for ever and ever by his conduct or belief in one brief earth life. We might just as well and as logically conceive that there never was a time when the soul did not exist, but that its existence comes to an end with the death of the physical body. If it begins with the physical body, it must certainly end with the physical body—and that is simply materialism. Orthodoxy is, in fact, always an abortion ; it is never wholly materialistic, nor wholly spiritual.

Nothing which is *eternal* can commence in *time*. That which commences in time must end in time ; and that is merely the physical form, the flux and change of phenomenon. The only basis on which man can claim his immortality is in his oneness with that which alone is immortal and eternal ; the birthless, deathless, ceaseless SPIRIT which lives and moves in ALL.

Individual forms are but the modes or phases of this One Noumenon. As such they appear and disappear in our individual consciousness ; a consciousness limited and conditioned by that which we call time and space ; which are but the *how* consciousness works, and not the *what* things are in reality.

The individual man, then, whether we consider him on the

mental, etheric, or physical Plane, has only a limited existence ; but his existence on each higher Plane must necessarily precede, as well as follow, the manifestation on the lower Plane or Planes ; just as the existence of the One Noumenon must necessarily precede, as well as survive, the existence of all the phenomenal universe of which it is the cause. The lower cannot be cause of the higher ; spiritual man cannot be born out of the physical.

The doctrine of reincarnation teaches that, not once, but many, many times, the Ego comes down into incarnation. If it can come once it can certainly come twice, or many times. Incarnation must be necessary for the Ego, a necessity of its divine nature, otherwise it would not be born into this world at all. We may view that necessity in a twofold light, (*a*) as necessary for the individual ; (*b*) as necessary for the Race.

The necessity for the individual will appear to us as a gradual perfecting through experience gained in many, many lives ; the necessity for the Race will appear in this light : that since the Race is made up of individuals, it is these individuals who must be perfected, if the Race itself is to be made perfect.

Since, therefore, the individuals are gradually perfected by the experience gained in a succession of lives, more and more perfect individuals will be born into the world, and the Race as a whole will progress accordingly.

Associated with this teaching is also the idea of cause and effect acting from one incarnation to another. In any one incarnation the individual *is* what he has made himself by his past efforts. But he not merely *is* such and such, in character, faculty, or powers, but also his circumstances, fate, or *Karma* will be largely determined by the uses he has made of his past. What a man sows, that he also reaps—in a future incarnation, if not in this.

There can be no question but that such an idea appeals strongly to our sense of justice ; and when once fully understood it gives an enormous stimulus to individual effort. It is a theory which, on broad philosophical grounds, we can hardly refuse to accept ; which doubtless has some fundamental and vital truth underlying it, seeing that in some form or other it has been put forward by those whom the world has recognised as its greatest teachers in all ages. We must be careful, however, not to accept it in too crude a form. We

may see clearly that the principle is simply the application, by correspondence and analogy, of universals to particulars; but in particulars we may possibly, nay, almost certainly, go wrong.

Reincarnation is a universal principle. The One Life incarnates and reincarnates unceasingly in the phenomenal world. The whole of physical matter is an incarnation of this One Life. But as such it came into existence in *time*, and in *time* it will disappear, though the cycle of its manifestation may be past our human powers to calculate or even to imagine. As a temporary manifestation of the One Noumenon it can only be one of an endless series. The Noumenon cannot cease to express itself as Phenomenon.

But the physical universe cannot be considered as a direct incarnation of the One Noumenon, but only as the indirect manifestation through lesser "Principalities and Powers"; each of which, being the image or reflection of the ONE, repeats in itself, in its own more limited manner, the powers and attributes which it derives from its own immediate Noumenon.

Thus when we endeavour to relate the ONE to our time and space phenomena, we are unable to conceive of IT as the immediate cause of the existence of the physical material world, or of physical Plane phenomena; but—inadequate as all such conceptions must necessarily be—we are compelled to place IT in some sense on a higher Plane, between which and the lower physical lies a vast cycle of involution and evolution.

Doubtless if we could regard the universe from the point of view of the ONE—perhaps we might even say, if we could regard it from the point of view of the spiritual Ego—it would be seen that these Planes, and these great cycles of involution and evolution do not exist in reality. Something in Consciousness, something in Life, makes these for Itself; imposes them, as it were, upon Itself by a process of Self-limitation.

Seeing, however, that in our present consciousness this apparent separation in time and space does exist, we are compelled to mark out artificial lines of latitude and longitude, artificial distinctions of Plane above Plane, and cycle following cycle; and, indeed, it is only by doing so that we can make use of language at all, to express what the universe *appears* to be to us and to our fellow-selves.

Speaking, then, in terms of our common consciousness, let

us conceive of the One Noumenon as *emanating* the highest Hierarchies of Divine Beings on the highest or spiritual Plane. These Divine Hierarchies, or " Divine Sons," must represent, in fact, the One Divine Life and Consciousness in so far as that ONE can be said in any sense at all to be *many*. We cannot possibly conceive of the ONE as splitting itself up, or as consisting of an infinity of physical atoms, for example. The ONE, we must ever bear in mind, is not a mere term for the sum-total of the many. It is a UNIT, in the highest and most metaphysical and abstract sense of the term.

The *primary* differentiation or individualisation of the ONE we can only conceive of as consisting of Beings, Powers, Gods, Logoi—call them what you will—so near to the ONE as to be practically identical with It. Yet each of these Powers, in so far as they are *individual*, must represent in some sense a *limitation* of the ONE ; must represent some special Divine IDEA.

We must, then, further conceive of each of these Cosmic Beings or Powers as repeating the process of emanation or differentiation ; producing thereby the limitations, differences, or distinctions of a lower Plane ; producing, in fact, on that lower Plane *individual* forms of life and consciousness, which, in their collectivity on the higher Plane, are *One*.

Thus, on the spiritual Plane, Man is One " Divine Son " ; but on the mental Plane becomes many spiritual Egos ; while on still lower Planes, one spiritual Ego becomes many human personalities or incarnations. The spiritual Ego, in fact, repeats or reflects the universal process, and becomes the informing or ensouling principle, first of all of a vehicle or body on the etheric Plane, and subsequently through this subtle etheric (or Astral) body, of the physical organism which we conventionally call ourselves.

We see that there is thus no break in the chain which links the lower to the higher—even to the very highest. Consciousness exists all along this chain in its appropriate vehicle or mode of Substance. It is universal as that Substance itself, but limited and conditioned on each Plane by the body or vehicle in or through which it is acting, and—so far as each individual is concerned—acting, as it were, along a definite individual line, determined by the part which the individual has to play in the economy of the lesser or larger cosmic cycles to which he belongs.

We thus stand in the same relation to higher Cosmic Powers as the lesser *lives*—organisms, cells, etc.—which constitute our physical bodies do to us. Each of these lesser *lives* may certainly be conceived of as having a limited individual sphere of action in which a certain amount of choice or free will may be exercised; nevertheless, each must play its own particular part in the larger economy of the whole body, and its *fate* is thereby inevitably determined for it.

Every atom of matter, traced back through all the Planes, gradually expands till it is merged in the infinity of Primordial Substance. Every individual form of consciousness, likewise traced back from Plane to Plane, must expand to infinity, must drop its limitations to become the Infinite 'I AM.'

Thus we are ourselves the *Path* along which we must travel to reach the goal of our evolution, to attain to the full measure and stature of the Divine Man, the indwelling *Christos*. Our consciousness, our life, is one with the Infinite and the Eternal; and nothing less than the fulness of this Truth, the perfect knowledge which can only be realised when we ourselves have reached that "inmost centre" within ourselves, can ever satisfy the thirst which the individual soul, lost in darkness, nescience, and illusion, now experiences.

On each of the higher Planes, Consciousness must necessarily transcend the limitations of the lower; and, thus transcending them, it cannot see, know, or apprehend *things* as we see and know them 'down here.'

By no possibility can we conceive of the One Absolute Consciousness as seeing or knowing a *thing* in the limited way in which we must see and know it in order that it may be represented in our individual consciousness as a physical object. Every *quality* which we ascribe to an object is a quality of *limitation*, due to the limitations of the sense organs through which consciousness is for the time being working. Colour, density, taste, smell, even form itself—the *how* we see a thing in space of three dimensions only—all are limitations, making *something* into a definite object; *something* which in reality has no limitations, for everything would expand to infinity if we could but see it in *all* its relations and proportions.

Nothing less than this must, indeed, be said to be the point of view of the One Absolute, or of Consciousness on the highest Cosmic Plane. In so far as the One Absolute can be said to

know a *thing* at all, IT must know it in *all* its relations and proportions, past, present, and future.

But seeing and knowing it thus, the thing has already ceased to be a *thing*; it has become the Whole. Where past, present, and future do not exist; where all is an eternal Now, how can *events*, such as we know, be present in consciousness?

The popular imagination doubtless represents God as seeing and knowing things and events very much as we do ourselves. Nothing could possibly be further from the truth. As Carlyle puts it: "With God, as it is a universal HERE, so it is an everlasting Now."

Christian Science is doubtless logical in at least this one point: that God, being by definition Absolute Goodness and Wisdom, cannot possibly know what we call evil. Whether Christian Science is equally logical in its definition and conception as to the *nature* of what we call evil, is quite another matter.

But let us substitute the word *limitation* for the word *evil* —for possibly evil is nothing but limitation—and we shall then see that God cannot possibly know evil, simply because He cannot—as God—know limitation. Infinite knowledge, infinite Consciousness, must necessarily be above all limitations. All limitation—or evil—must be a negation, in the sense that it is the *absence* of something; something deprived; something *less* than the Whole. It is something *not* present in our consciousness. To know the *reality* of things, therefore, we must abolish or break down the limitations, the sense of separateness from the whole. In other words, the only Reality is the Infinite.

God, the Infinite, cannot know evil (limitation)—yet even so, is not God Himself incarnated in each one of us, in order that He may know it?

The difference which exists in consciousness when functioning on the higher Planes is fully confirmed by all that we know through psychical research as to the various abnormal states of consciousness into which the individual may pass. The fact that things are not, and cannot be, seen in the same relation and proportion on the higher Planes, will account to a large extent for the difficulty which is well known to exist in interpreting in terms of physical Plane consciousness what may be seen and known on the higher Planes in such abnormal states. It may also, perhaps, account to a large extent for the

fact that such great difficulties exist in obtaining clear communications with *post-mortem* states of consciousness.

When once we have grasped the fundamental principles which must underlie the manifestations of consciousness on different Planes, or in different modes of Primordial Substance, we shall have a fair understanding of the broad principles upon which the doctrine of Reincarnation is based.

The spiritual Ego, as the pilgrim of the universe, must pass through all experiences. He cannot separate himself from the evolution of the Race. The evolution of Humanity is his evolution in exactly the same sense that the whole Cosmic evolutionary process must be said to belong to the One Noumenon. In one sense, the Noumenon is above and beyond all evolution, remaining changeless and unmoved throughout all cycles. In another sense, the cosmic process of change and motion is the very nature and essence of Its Being.

So also is it, by correspondence and analogy, with the spiritual Ego, which stands in the relation of a Noumenon to our human personalities. Living ever in the light of the spiritual Plane, bathed ever in the radiance which emanates from the ONE: what need has that Ego of the poor experiences of the mortal man—nay, what even can he *know* of the darkness and limitations of the physical Plane?

Thus, although in one aspect the Ego is the Divine Son, the *Christos*, living ever in the bosom of the "Father"; yet in another aspect he is the Christ who must needs be crucified on the cross of *matter*. He descends into matter and incarnation, in the sense that he is the informing principle, the divine *light* "which lighteth every man coming into the world."

In *exoteric* Christian doctrine, Christ was born into the world once, as one particular historic personage; in *esoteric* Christian doctrine, Christ is the inner spiritual *self* of every man, with whom we (the personality) must become *one*, if we would accomplish our 'salvation.' In the one case the divine incarnation is a mere historical event; in the other case it is a cosmic process, coextensive with the whole evolution of Man.

The spiritual Ego, then, standing as it does in the same relation to a certain lower order or cycle of evolution—our own personalities and incarnations—as the one Noumenon does to the whole Cosmic process: must in some sense be said to be the experiencer and knower of that evolutionary

process. We may perhaps accept this with the reservation that that process is not by any means in the consciousness of the Ego what it appears to be to us. We cannot for one moment suppose that the hopes, fears, and desires of the lower personality, of the conventional 'I,' can in any sense be those of the true self, the spiritual Ego.

Let us take the cosmos of our own body for an analogy. While it is true that 'I' know and experience through my body, through the millions and billions of *lives* which constitute that body: how much do 'I' know of the individual consciousness of those *lives*; of the struggle for existence, and survival of the fittest, which goes on in the cells and blood corpuscles; of the *psychic* activity which even Haeckel is obliged to postulate of these unicellular and multicellular forms of life of which my body is built up?

Just as Primordial Substance constitutes the permanent matrix of the whole phenomenal universe—and we may, and must, conceive of an endless succession of such universes as arising and disappearing out of that matrix—so with the spiritual Ego, which on its own Plane is the matrix out of which and into which arise and disappear a succession of personalities on the lower and physical Plane.

Something we must necessarily conceive of on the higher Plane which stores up or reaps the fruit of the experiences of the individual on the lower Planes; something which brings forth ever-increasing powers, faculty, character, in the physical man. How else should the Race progress?

If one man differs from another in these respects—as indeed it is our common experience that vast differences do exist—we must, in conformity with our fundamental principles, credit these differences to an evolutionary past; a past in some way belonging to the individual. The Race is made up of individuals, and the progress of the race can be none other than the progress of the individuals.

Something, then, which has a past experience, *reincarnates*; it takes form and substance on the physical Plane; and, in a certain sense, *begins* where it left off before.

But if we ask the question as to what it is which thus reincarnates, the answer is not easy to give. We must be careful not to accept any crude or bald statement of this doctrine. We may certainly say that it is not the conventional 'I'—Mr. Smith, or Mrs. Brown—which reincarnates. Neither

is it the spiritual Ego which comes down to Earth. That Ego, as we have already seen, belongs to, and must always exist on, its own Plane.

Let us take an analogy. The Sun does not *come down* to this Earth, although his activity and magnetic emanations are incarnated in every form of physical activity on this globe. Without his *life* the world would be cold and dead. Neither does the One Noumenon *come down* to Earth; though in truth in IT all things live, and move, and have their being. Perhaps even thus may we best think of the relation which subsists between the spiritual Ego and the human personality.

Psychical research discloses to us a *subliminal self*, whose depths are unfathomed, and indeed unfathomable, for it belongs to the Infinite Itself. There is in reality no break in consciousness from the smallest individual life to the Infinite Life: just as there is no break in the continuity of Substance, from the smallest atom to the infinite ocean of Primordial Substance. There is no break in consciousness, though there is many a break in *memory*—which is quite a different matter.

The human personality is but a time phenomenon of something which is permanent and eternal. It is, as it were, the activity manifested on the physical Plane of a *ray* from the spiritual Ego. Along that ray, that magnetic thread, may pass to the personality a constant stream of divinest power and inspiration, if we will but turn from outward seeking, and objects of sense, and open ourselves for its reception and inflow.

Along that ray also, consciousness must retire when the physical body is dropped; taking with it all that naturally belongs to the Higher Self; dropping, as it drops the physical body, all the limitations of the lower Planes; and either forgetting altogether its earthly experiences, or transmuting them by nature's higher alchemy into the pure gold of spiritual life.

Let us get rid, then, of the idea that the whole of the 'I' is comprised in the conventional self which acts and moves down here. Let us get rid of the notion that the spirit belongs to the body; and that the experiences of the personality are of vital importance to the future happiness and well-being of the divine Ego.

The spirit is birthless and deathless; and while in some sense it must be true that *our* experiences are its experiences,

it certainly cannot be true in the conventional and limited sense in which it is usually received.

Coming into touch *now* with our Higher Selves, or falling back, when we drop the physical body, upon that deeper and fuller consciousness which is *ours* by nature : it may indeed seem that it is the present ' I,' the personality, which thus attains ; for the thinking conscious I must always be I, even if it expands to Infinity. But in reality we *are* that Infinite Self ; and we can only fall back upon *Ourself*.

Thus, while it is true that the individual self is an illusion ; that even the spiritual Ego is no more than a temporary aspect of the ONE ; that all that is individual is but the ONE seen and known in part, or by limitation ; and that the human personality is but as a foam-fleck on an infinite ocean—yet it is also true that even that which we know as our present *selfness* is immortal and eternal. That which is limited can only disappear as *form* ; its *substance* must necessarily be merged in a larger whole, till all limitations are dropped, and the individual sees and knows *itself* as the ceaseless changeless ONE.

CHAPTER XV

THE HIGHER SCIENCE

"Ever more clearly must our age of science realise that any relation between a material and a spiritual world cannot be an ethical or emotional relation alone; that it must needs be a great structural fact of the Universe, involving laws at least as persistent, as identical from age to age, as our known laws of Energy or of Motion."—FREDERIC W. H. MYERS.

CHAPTER XV

THE HIGHER SCIENCE

When the fundamental principle of the Unity of the Universe has been clearly understood in its many aspects ; when it is fully apprehended that all diverse phenomena whatsoever are only the One seen and known partially and incompletely, seen and known in a limited manner under conditions or states of consciousness which give rise to the limitations which we call *time* and *space* ; when we have learnt that life and consciousness must be as eternal and indestructible as their objective correlatives, matter and motion, and that the real " law of substance "—of that which sub-stands the Universe in its totality, which sub-stands *subject* as well as *object*—is the ceaseless activity of Being : then also we come to a clear understanding that our own individual life is necessarily only a temporary phase of that One Life which moves in All, and that there must be *natural laws*, " great structural facts of the Universe," connecting our present personalities and consciousness with the higher or more interior Planes of the Cosmos, with the Unseen Universe, even to the very highest or innermost, to the One Noumenon Itself.

To discover and elucidate these " structural facts " is the province of a *higher science* than that which deals merely with the mechanism of physical matter, or with the Universe considered merely as a machine ; it is a true science of Life and Consciousness, and not a mere science of mechanics, or thermodynamics.

In all ages there have been students of this *higher science*, and the structural facts themselves have never been without their witness and exponents. But in modern science, as in modern religion, there is an *orthodoxy* which excludes very much which is of the highest interest and importance ; nay, which even denies *facts* on *a priori* grounds, and keeps men

back from Truth which might illumine and enrich the whole of human life and endeavour.

But facts have a strange insistency, a habit of repeating themselves until they finally obtain complete recognition; and now, at the commencement of a new century, the facts of man's higher or deeper nature and powers which were formerly relegated entirely to a supernatural spiritual region, and either ignored or denied by orthodox science on the one hand, or traded upon by priestcraft and superstition on the other, are receiving the attention of some of the foremost scientists and keenest intellects of the day.

Physicists have gradually arrived, during the past century, at a clear understanding of the absolute dependence of all physical Plane phenomena upon the nature and properties of the Ether; and, finally, at the idea that physical matter *is* etheric in its substance; that by disintegration it may be resolvable back into Ether itself; into a substance to us impalpable, intangible, and imponderable; a substance apparently filling all space, and constituting the 'matter' of the unseen universe.

But it is now beginning to be scientifically recognised that the potentialities of that unseen universe are not merely those of matter and motion, but also those of life and consciousness. Just as we must fall back upon a higher or more interior Plane in order to explain the nature of the atom and molecule, so also we must fall back upon something which is certainly *not* physical, in order to explain man's psychic nature—leaving out of account for the present anything in that nature which might be more truly described as *spiritual.*

Behind the mere physical activities and nature of the atom and molecule, lie the prodigious potencies of the Ether, out of which the atom is evolved; potencies which are only partially disclosed in the atom, *quâ* atom, simply because the atom, to be an atom to us, must be *limited* in its nature. If the atom disclosed to us more of its inner nature, more of its *total* nature; if in consciousness we could penetrate its etheric nature, and know what it is *quâ* Ether: it would thereby cease to be to us that thing which we know as a physical atom, and we should enter in consciousness into a totally different world than that which we now perceive, and which we know as the physical Plane—albeit we should be only seeing the same thing or things in a different manner, and with less limitations. All things are *things* merely by limitation; and

the limitation is not in the thing perceived, but in the perceiving consciousness.

And as it is with the atom, or with any *thing* which may be an *object* of perception, so also is it with the *subject*, or individual *self*; with that limited aspect or mode of the One Life which we know as Man, or as our individual selves. As individuals, as time and space phenomena, we are but the ONE known partially and incompletely; and as such we present an outer or limited appearance, while in reality the inner depths of our nature are as deep as the Infinite Itself. Behind the normal man, behind the consciousness and psychic activity which normally manifests itself in or through the physical organism—which comes to the surface, as it were, in that organism—lie the prodigious potencies of the higher self; even to the highest, to the One Self. Like the atom, man as we know him is only so because of limitations. See and know him in his whole nature, and he is a God—nay, God Himself.

It was formerly thought that every physical atom of any one particular substance—oxygen, for example—was absolutely identical in all respects with every other atom of the same substance. It is now known that considerable individual differences must exist; and that the special physical or chemical properties which any substance exhibits in bulk, are simply an average of the individual qualities of the constituent atoms.

In a similar manner, although individuals may vary very much in character and faculty, there is a certain average of psychic activity which we broadly attribute to all; a certain common perception of things which constitutes the normal sense consciousness of mankind at the present stage of evolution.

This normal is largely determined by, or coincident with, the course of physical or organic evolution; and, in the individual, by his particular inherited physical organism. The simple reason for this would appear to be that, in the large majority of individuals, the animal or physical still very considerably dominates the psychic or spiritual; and also that, even in more advanced members of the race, the subject or self identifies itself for the time being almost entirely with the vehicle in which it is temporarily functioning. For this reason, the *faculty* of sight is, in the normal individual, entirely identified with, and limited by, the *organ* of sight. To such an

extent is this the case, that even when a true vision of something super-physical is seen—for example, the *double* of another person, which is not within the range of physical sight—the object is apparently seen with the physical eye; the faculty of sight and the organ of sight being absolutely identified in the mind of the percipient subject.

Now if man were, as materialists of the Haeckel school maintain, absolutely the product of physical evolution; if the subject, the self, or Ego is only "the sum-total of the psychic functions of the cells which build up their (its) structure" (*Riddle*, p. 54); we should expect *faculty* to be absolutely dependent upon organism. By no possibility could a man ever really see or hear outside of the limits of the physical organism, and any such apparent seeing or hearing would be classed as a subjective hallucination. Such a classification has, in fact, as is well known, been that which orthodox science has hitherto commonly given to all *abnormal* phenomena of consciousness or psychic activity.

But what is the position which obtains when it is once clearly proved that individuals can and do see and hear definite physical happenings which are altogether outside the range of their physical organs of sight and hearing; events which are taking place hundreds or thousands of miles away from them; nay, stranger still, even events which have not yet taken place at all on the physical Plane, but which afterwards do happen there—not to mention super-physical happenings, which it is difficult or impossible to verify, but which are certainly clear enough in the consciousness of some individuals?

The recognition of the fact that some individuals do possess these abnormal powers of sight and hearing; or that in exceptional circumstances these powers may manifest themselves in individuals otherwise normal in the use of their faculties; or that such abnormal powers may be induced by mesmerism, hypnotism, or other means; these, and other facts of an abnormal nature, now fully recognised, constitute the basis of the modern science of psychical research; the foundation of a new psychology which is gradually supplanting the old academic psychology which has hitherto relegated all such abnormal phenomena to the region of hallucination or fraud.

But the new psychology is a truer science than the old, not merely because it accepts facts as it finds them, instead of denying them on *a priori* grounds, but also because the true

science of man must necessarily recognise the inner depths of his nature ; must recognise his connection with all the Planes of the Universe as a "structural fact" ; must find in the unseen universe the root of his life and consciousness, just as certainly as we must find there the root of all the objective phenomena of matter and motion.

If Primordial Substance is the root of the latter in their last analysis *quâ object*, it is assuredly also the root of the former in any possible *manifestation*. If consciousness were not inherent in *all* Primordial Substance, it could not manifest in *any* form or mode of it—physical matter, for example—unless indeed we postulate an eternal dualism of spirit and matter, in which spirit is alive and matter is dead, instead of a universe in which these two are but aspects of the One Noumenon.

But, since the latter is the position we hold, it is clear that no form of Primordial Substance, whether in the seen or the unseen universe, can be without its corresponding or correlative life and consciousness. Primordial Substance is ONE ; continuous, homogeneous, filling all space. No portion of this unity can be alive and conscious, while the rest is dead and unconscious ; for to postulate this is immediately to make of it a duality instead of a unity.

Let us clearly understand also, that just as certainly as the root of matter is not matter as we know it, nor anything in the remotest degree resembling our physical Plane matter : so also the root of life and consciousness—whatever name we may give to it—is certainly not life and consciousness as we know these, conditioned by physical Plane limitations, but something so utterly transcending that which we now recognise as life and consciousness, as to be indescribable in any terms whatsoever which we can now apply as derived from our present normal experiences.

Even as our earth, revolving continually, suffers the vicissitudes of day and night, and summer and winter, though the mighty Sun by which it is energised sheds ever its radiance upon it : so also the individual Ego, revolving on the wheel of birth and death, suffers eclipse of that glorious fulness of light and life which ever radiates from the one source of its Being. Strange perversion of language, that the darkness and night of eclipse we should now call *life*, while the entrance into the light we should name *death* !

The *higher science* is the science of man's inner nature and powers; the study of the structural facts of his connection with all the Planes of the Universe. These structural facts have been known in all ages, and there have always been those to whom the true *natural* science has been that of the hidden or occult side of man's nature, rather than the mere mechanism of physical matter.

Not without knowledge did Bulwer Lytton write in *Zanoni*:

> "When we, O Mejnour, in the far time, were ourselves the Neophytes and Aspirants . . . we commenced research where modern conjecture closes its faithless wings. And with us, those were the common elements of science which the sages of to-day disdain as wild chimeras, or despair of as unfathomable mysteries."

But now orthodox science itself is commencing to recognise the existence and significance of this occult region of man's nature and of the Cosmos. Already, by many scientific men whose names are household words, much has been accepted which until quite recently was classed as the veriest superstitious rubbish. Many so-called *spiritualistic* phenomena have been verified and accredited, though not, be it noted, the common spiritualistic theories which have been attached thereto.

It is quite true that a large amount of trickery and fraud has been discovered and exposed. It seems inevitable that such deception should always be associated with anything in which superstitution plays a large part, as it undoubtedly has, and still does, in anything supposed to be *supernatural*. This is the direct result of the teaching of authoritative and traditional Christianity, which is based entirely upon supernaturalism; which has always taught an absolute antithesis between the natural and the spiritual; which has not merely failed to recognise that these must necessarily be inter-related in a cosmic manner, but has, down to the most recent times, and does even to-day, offer the most stubborn resistance to the advancement of scientific knowledge and rationalistic thinking based thereon—as witness the Pope's recent Encyclical on Modernism. It is hardly to be wondered at that a community which for centuries has been saturated with the idea of the supernatural, should fall an easy prey to all and sundry who are cunning enough to play upon an inbred and inherent superstitious fear of the unseen and unknown.

Nevertheless, facts are facts, and a whole ocean of fraud and deception, or of misrepresentation and misconception, does not destroy the actuality or value of a fact, any more than that the abuse of religion by priestcraft is an argument against the existence in man of a true religious instinct or sense of the Infinite Nature of his being.

It is not without interest to the student of history, and to those who take the very widest possible view of man's evolution, that the facts of his higher nature which have always been known to many outside the pale of orthodoxy in science and religion, are now about to obtain the recognition of the official representatives of the former, if not of the latter.

It is of profound significance that the great truths of man's higher nature are about to be taken out of the region of traditional and authoritative beliefs, and placed on a basis of "structural facts"; that man's higher evolution, the unfolding of his mental, moral, and spiritual nature, will be shown not to be dependent on any mere historical fact or facts, however well verified; but that his higher nature, like his physical body, is subject to natural laws, and is equally part of a great cosmic process; that his well-being at all times, past, present, and future, is not determined by the arbitrary enactments of any personal deity, but is strictly a matter of cause and effect, and—even with his present powers—is largely in his own hands; whilst the full realisation of his divine nature will free him altogether from his present limitations and disabilities.

The acceptance by official science of *some* of the phenomena which disclose the *rapport* of man with the higher or psychic Plane, marks the commencement of the invasion of a region hitherto supposed to belong exclusively to authoritative religion; and it is curious to note this commencement of a new phase in the historical struggle between science and ecclesiasticism, where science, having completed its destructive work on superstitious supernaturalism, itself commences to build upon the very ground where it has previously razed, and even with the materials which it formerly rejected.

We are only at the commencement, however, if this new era of scientific Idealism and Religion. Old-established beliefs can only be changed or transmuted very slowly, and science itself is at present only advancing into the new region in a hesitating and almost apologetic manner. Another fifty

years doubtless will see changes in thought, both scientific and religious, even more radical and far-reaching than those which have marked the last half of the nineteenth century.

On every hand evidence is coming in that consciousness can not merely transcend all the normal limitations of time and space, but that physical laws themselves, hitherto considered to be fixed and immutable, can be abrogated or subordinated to unknown forces operating from some higher Plane under the direction of conscious intelligence.

What were previously classed as miracles are now calmly investigated by scientific observers. It would be a curious result if official science, which led the van of the attack on the credibility of the New Testament miracles, should in the end confirm their possibility. Already it has done so for some. The possibility of the appearance of Jesus to his disciples after his death (we do not say in his *physical* body) has already been amply demonstrated.

It is not possible here to enumerate the whole, or even a small portion, of the various phenomena upon which psychical research is now working ; neither can we deal with the many results and conclusions already arrived at by many prominent workers. For that purpose we cannot do better than refer our readers to the epoch-making work of the late Frederic W. H. Myers, on *Human Personality and its Survival of Bodily Death.* This book largely summarises the work which has been done during the past twenty-five years or so by the Society for Psychical Research, with which Mr. Myers was so intimately connected. The book itself may be said to mark definitely the commencement of a new era in psychological science, in the same manner that Darwin's *Origin of Species* marks the point at which the theory of evolution definitely took the place of the old catastrophic and creational theories —though many eminent men to-day refuse to accept the evidence, just as many leaders of thought, eminent biologists, such as Cuvier and Sir Richard Owen, refused to accept the evidence which Darwin offered ; whilst other writers, such as Gladstone, Carlyle, and Ruskin, repudiated Darwin's theories on quite other grounds.

Mr. Myers endeavours to summarise and arrange the vast mass of materials and ascertained facts which psychical research has brought to light, so as to form a definite and cumulative proof that man not merely possesses super-physical

faculties and powers which he may exercise at the present time under abnormal conditions, but also that there is a survival or persistence of the individual consciousness after the death of the physical body; and that under certain circumstances this surviving consciousness, or individuality, although beyond the reach of our mere physical senses, can and does communicate with us telepathically.

The evidence for this fact consists principally in the receipt of verifiable information relating to certain matters which could not by any possibility be known to the recipient, or be communicated to him or her telepathically, but unconsciously, by some living person.

Since the phenomenon of the sub-consciousness, or *subliminal* consciousness, has been fairly well understood through the study of hypnotism, and it has been recognised that the subliminal possesses an extraordinary capacity for reproducing under abnormal conditions knowledge or information which the normal personality does not possess, which it has lost or forgotten, or even which it never did possess: it has become necessary to exercise the greatest possible care in all cases of so-called spirit communications, not merely to guard against conscious fraud and trickery on the part of the medium, but also against unconscious deception, against messages or information given in perfect good faith, but in reality existing in the subliminal consciousness of the medium, or telepathically communicated to him or her, while in the abnormal state of trance, by living persons.

So-called spirit communications, however well attested or valuable they may be as individual experiences, can have no real scientific weight as evidence of the actual survival of the individual, after the death of the physical body, until they have not merely been attested as facts—that has been done over and over again—but their true nature discovered by the thoroughly scientific method of eliminating all possible sources of error.

That this will eventually be done, even if it has not already been accomplished, is the firm conviction of many eminent scientists at the present time.

It will readily be seen, on the basis of the principles laid down in this work, that we should clearly anticipate such a result.

Our foremost principle is the universality of Life and

Consciousness: their co-existence with Primordial Substance filling all space. As a corollary to this—and also to our empirical knowledge that *some* forms of Primordial Substance exhibit or manifest *individual* forms or modes of life and consciousness—we have the principle that *all* forms of Primordial Substance are instinct with life and consciousness; but—*quâ individual forms*—manifest these in an individual, *i.e.*, in an apparently isolated, separated, and limited manner.

That individual mode, then, of the universal life and consciousness which we know as *ourselves*, and which at present we identify almost entirely with that aggregation of physical Plane matter which constitutes our physical body: might conceivably cease to exist as an individual mode when the physical body breaks up; it might become merged immediately into the universal ocean of consciousness—though still retaining its sense of existence or being.

But we have seen reason to believe that there must be several Planes of substance between the physical and the universal, upon which the individual consciousness might fall back, and find suitable conditions for persisting in an individual manner. All analogy, indeed, would teach us that there can be no such sudden bridging of the vast gulf which separates our present limited consciousness from the universal, as would be implied in our merging in the universal as soon as we leave the physical. We have to take into account the vast cosmic process in which man shares. Man must reach the universal, the divine, by means of that process which we now name *evolution*.

But we must not lose sight here of the fact that man already exists on all the higher Planes of the cosmos, right up to the Universal itself. We are using merely conventional language when we speak of *leaving* the physical, or of *entering* a higher Plane. We are not representing the real structural facts of our nature when we speak thus. There can in reality be no break in consciousness from the universal to the individual, any more than there can be a break in substance. We exist *now* on every Plane of the universe; and in falling back upon a higher or deeper Plane man does but fall back upon *himself*: for the self in man and the universal Self are ONE and the same.

If the facts which psychical research brings to light respecting the inner depths or contents of the subliminal

self have any significance whatsoever, it is precisely in this respect : that it discloses that all the so-called higher Planes, all that unseen region inaccessible to our normal consciousness, but which is by far the largest part of the sum-total of the universe—and in which all *causes* must lie—is part of the contents of the real Self, is already within the consciousness of our real Self, did we but know how to gain access to it, how to bring it through, as it were, to the normal but limited mode of consciousness which we conventionally call ourselves.

The real secret of the whole matter appears to be this : that although consciousness, as being inherent in Primordial Substance, is continuous and universal, yet it identifies itself more or less completely for the time being with individual forms of that substance ; indeed, the limitations of *things* which constitutes the world of phenomena must be said to be primarily due to this limitation of consciousness.

This identification of consciousness with forms of substance is our common and empirical experience. That which is *present* in consciousness is simply that to which for the time being we direct out attention, whether it be external objects which claim our attention through our physical organs of sense, or the subjective consciousness of the contents of the mind, to which in a similar manner we may direct our attention. We may abstract ourselves in thought so as to be totally oblivious to our physical surroundings, and in sleep, or hypnotic trance, the oblivion becomes absolute. But normally in our waking state our attention is more or less compelled to be occupied with our physical surroundings ; consciousness is directed outwards, or rather it is occupied with the innumerable vibrations conveyed to it through the sensory organs, nervous system, and physical brain.

Being compelled thus to work through the physical body, the conscious self appears for the time being to be almost wholly identified with that body. It is not merely limited in its powers of observation by the limits of the physical organs ; it not merely sees and hears only within the limits of the vibrations to which the physical eye and ear are capable of responding ; but it is largely controlled by, and subject to, the psychic activity of the cells or *lives* of which the body is built up.

Haeckel, we have already seen, postulates a cell *memory*, a cell *soul*, a psychic activity even in the simplest cell ; all

of which is evolved and hereditary. Weismann also, we have seen, postulates that the protoplasm of to-day must be vastly different by reason of evolution and heredity from the primal protoplasm: all of which simply means that *experience* is stored in, and handed down from cell to cell.

We would go further than either of these, and postulate an *atomic* memory, an *atomic* soul, an *atomic* psychic activity. We would postulate that in the consciousness of the atom, could we but penetrate deep enough therein, there would be found a record of every experience through which that atom has ever passed; every vibration to which it has ever thrilled is *present*, and can be reproduced.

One of the facts brought to light by modern psychical research is that which comes under the general heading of *psychometry*. Certain sensitive subjects can actually come into *rapport* with this atomic memory; and, by handling a piece of stone, metal, wood, or fabric, can describe events with which these may have been associated. In other words, there is a soul, a memory, in *things* as well as in organisms.

On the basis of our fundamental principles, how could this be otherwise? Consciousness is ONE, inherent in *all* Primordial Substance; and in that Substance *quâ* Substance, the knowledge and memory of ALL exists eternally.

The *subliminal* consciousness of atom, or cell, or brain, or man, is simply that wider and deeper consciousness which belongs to Substance *quâ* Substance; whilst *quâ* atom, or *quâ* cell, or *quâ* brain, it manifests only *part* of its infinite contents.

To ignore the inner facts of the atom, its real essential nature as Primordial Substance, is both unscientific and unphilosophical. But that inner psychic nature can never be described in terms of physics and chemistry. One might as well seek for the *idea* of the artist by a physical and chemical analysis of the pigments which he uses in setting forth that idea in visible form.

What we have to note here, however, is simply this: that the normal consciousness, which we conventionally call ourselves, is largely—and in the lower organisms perhaps entirely—limited and conditioned not merely by the structure and capacity of the physical body considered only as a mechanism, but also by the inner or psychic activity of the cells or lives of which it is composed.

So much is this the case, and so clearly is the normal consciousness a matter of physical conditions, evolution, and heredity, that it is hardly to be wondered at that physiological psychologists, such as Haeckel, who approach the problem of life and consciousness wholly from the material side, from the side of mechanism, should declare that these are simply the products of mechanism, and have no existence apart therefrom.

It is undoubtedly largely true, even of man at his present stage of evolution—and certainly of the lower orders of evolution—that the psychic activity is little, if any, more than " the sum-total of the psychic functions of the cells which build up their structure."

Our normal consciousness is largely, if not wholly, a *brain consciousness* ; it is dependent not merely upon the impressions which the brain receives from moment to moment through the nervous system and sensory organs ; not merely upon the stored contents of the cells—that is to say, upon the vibrations which have been impressed upon them by the experiences which the individual has passed from through birth onwards—but also upon the purely physical heredity of the cells and organism ; the *memory* which is transmitted through, or associated with them as the result of untold ages of physical evolution.

Now it is noteworthy that those contents of the subliminal self which are mainly brought to light through hypnotic treatment are almost entirely of the nature of remnants or fragments of past experiences. These experiences are not necessarily those which the person thus stimulated can recognise as his own, but are often of such a nature that they must apparently be attributed to another and quite distinct personality, and would appear to include much which might possibly be attributed to inherited cell memory rather than to the personality at all—strange uprushes, as it were, of an evolutionary past. The contents of the subliminal self which are brought to the surface by this means are, indeed, so peculiar, varied, and puzzling, that Myers has likened this part of the personality to a vast " lumber-room."

Consider, indeed, what our physical body means as the summation of the vast evolutionary past of organic evolution. Consider that there is an actual physical continuity through the germ-plasm, going back to primordial protoplasm—and

beyond. Could we but read it aright, every cell in our body would disclose the whole past, every atom would tell us its whole history.

Every atom vibrates with its whole past. Every atom and cell strives to *live*, in its individual manner, according to what we call its *nature*: which is simply the tendency to repeat what it has done in the past, to *reproduce* that past; simply because that is its line of least resistance, because what it has done once it can do more easily a second time, and what it has done an infinite number of times it can do automatically and without attention. How else should *we* perform, so all-unconsciously, those functional activities which are necessary for the life of the body as a whole, but to which it is unnecessary that we should now pay attention except in cases of organic disease or functional derangement?

Is it indeed 'I' who really perform those functions; or is it not rather that 'I' enter into this complex of lesser lives: and am either a subject and a slave thereto, or else rule in this kingdom, this cosmos of my body, as a wise and autocratic king rules in his own domain?

The physical body represents a vast physical evolutionary past; and perhaps it will not be saying too much if we assert that the great majority of mankind at the present stage of evolution are little more than the physical personality; that the higher self is almost wholly obscured, limited, overpowered, by physical Plane conditions and vibrations.

But just as certainly as the body is the product of this vast evolutionary past of organic life; and the consciousness, self, or Ego working in or through that body is normally almost wholly limited and conditioned thereby: so certain also is it that that self or Ego can rise above these conditions, can become the ruler of the body, and can draw down and manifest through the body, not *sub*-physical, but *super*-physical powers; not *sub*-liminal, but *supra*-liminal consciousness; can manifest not merely a "sum-total of the psychic activities of the cells of the body," or bring forth strange objects from the "lumber-room" of the past, but can also bring to light the vast experience and knowledge garnered by the higher-self, whose true habitat is not the physical Plane, but those higher or deeper regions of that unity which we call the Universe; and which, though unseen, though not at present entering into our individual conscious-

ness as an objective reality, are nevertheless even now reached and understood by the mind, and are as absolutely necessary to explain what little we do know of the nature of man and the universe as the existence of the unseen Ether is to explain certain physical phenomena.

The contents of the subliminal consciousness are not *all* lumber. Through psychical research we come into contact with a large class of facts and phenomena which must be explained quite otherwise than as being the result of a past physical evolution; as having been left behind, as it were, by the evolving consciousness or self, and thus sunk *below* the present normal field of activity of that self. These abnormal and *higher* phenomena or states of consciousness must be regarded rather as indicating the road which the evolving Ego has more immediately in front of it; as that which lies *above*, rather than below, the normal consciousness.

If we apply the term *subliminal* to *all* the contents of the self which are normally beyond the reach of our waking consciousness—and this is what Myers does—we are doubtless justified in postulating that that subliminal is deep as the Infinite itself, that the self in man and the Self of the universe are one and the same.

But it will be necessary now to distinguish clearly between those phenomena which come from the past of evolution, and those which are indications of the future; between those which well up from the sub-consciousness as the result of past experiences, and those which come down from the super-consciousness as a foretaste of experiences and powers not yet realised. Our analogy of the surface of the ocean, to which we have referred in our last chapter, having served us thus far, we may now abandon in favour of a more extended conception.

We have already learnt, on the basis of what physical science has to tell us, that the ocean of Primordial Substance is *continuous*, and that the Substance itself must, therefore, be incompressible and inextensible. In other words, the apparent density of bodies, the apparent *surface* which a hard substance presents, does not exist *quâ* substance, but only *quâ* motion.

If we observe the expanding circular ripple which results when a stone is thrown into a pool of water, we see that there is an apparent forward wave motion. *Quâ object*, there is a

difference between the advancing wave form and the undisturbed water immediately in front of it ; *quâ substance,* we know that there is no difference. Not merely so, but it is only the *form* which advances, there is no real advance of substance, but only a vertical up-and-down motion of the water at each point, as may be seen by placing a cork upon it.

Now let us revert to our conception of vortex-rings formed in the ocean of Primordial Substance. These rings, as having *motion,* have for consciousness a definite form, an outline or surface ; but, *quâ substance,* they are no different from the surrounding medium. Suppose that these forms, instead of being rings, are spheres or globes, and moreover that these spheres are continuously expanding.

Now let us further bear in mind our fundamental principle that the continuous Primordial Substance filling all space represents not merely universal *Substance,* but also universal *Consciousness* ; that Consciousness is as continuous as Substance, because inherent therein.

We may now compare our individual self to a mode of motion in, and of, Primordial Substance such as that of the expanding sphere. Our present illusory and ever-shifting " threshold of consciousness "—that which appears to us to have a definite limit or surface, differentiated and distinct from other forms, and from the invisible ocean of Primordial Substance all around us—will be consciousness acting at the surface or boundary of the sphere ; and though one in substance or essence with that which fills the whole universe, with that which IS the Universe—it will have, *quâ* form, or *quâ* motion, not merely an apparently individual existence, but also an *inner* and an *outer* ; a *past* which will appear as the content already included in the expanding sphere, and a *future* which will appear as that not yet included.

The expansion represents our evolution. The content of the sphere represents the sub-consciousness, that which the individual has already included by evolution in his individual sphere. All that apparently lies outside of the sphere, in the infinite ocean of Primordial Substance, represents that vast future which lies in front of the individual, and towards which, to the inclusion of which within our individual sphere, we are ever expanding or evolving. The expansion can stop nowhere short of the Infinite itself.

We must not press this analogy too far, however; no mere analogies can be thus pressed. We should clearly understand that the real self—either *quâ* substance or *quâ* consciousness—is neither inside nor outside the individual sphere. The real Self is the Infinite and Eternal Itself, the changeless, formless, bodiless, ONE.

Let us also understand that *we*—the normal consciousness—may turn our attention either outwards or inwards; that not merely are all the vibrations of the past, of that which lies within the individual sphere, impinging upon our consciousness—the surface or boundary of our sphere—and claiming our attention, but also all the vibrations of the future, all the vibrations which lie outside of our individual limits. Our evolution or expansion will depend upon the attention which we pay to that which apparently comes to us from *above*; upon our receptivity and willingness to expand towards the infinite, towards that larger measure of life and consciousness which we now speak of as belonging to the higher-self; which lies apparently beyond, or even outside of our present self, but which in truth is more really ourselves than that which we conventionally conceive of as such.

Herein also we see that the selfish man, the man who regards himself as an isolated being, and is wrapped up in the hopes and fears of the mere illusive form of the individual self, must for that very reason fail to accomplish any measure of progress. Selfishness means limitation, and limitation means evil, for the individual and for the race.

We can form no conception as to what may be the real nature of this great cosmic process whereby consciousness becomes thus individualised; nevertheless it appears to be quite clear that consciousness when once associated with particular forms or modes of Primordial Substance—when once embodied in form, or "fallen into matter"—has considerable difficulty in escaping therefrom; and, indeed, can only do so by means of this same evolutionary process.

Not merely does there exist the illusion of form, and the sense of separation in the individual consciousness itself, but there is a constant tendency to act along the line of least resistance, to repeat over and over again the acts of the past, to recapitulate all kinds of acts and experiences which, by reason of their familiarity, apparently give a sense of satisfaction or pleasure to the individual. Thus "history repeats

itself," and the progress of human evolution appears to be incalculably slow. How little does the individual accomplish in one incarnation ; and yet it is only as the individual accomplishes that the race can progress.

What is it, indeed, which commonly fills up the measure of life and effort in the individual ? Is it not wholly a *realism* which can see no further than the mere common appearance of things, and which grasps at this illusive appearance with a desire to experience happiness and pleasure therein ? All the vast experience of the past has apparently not yet taught the great mass of human kind that these illusive pleasures at which they strain have no permanent reality, and inevitably bring with them an equivalent measure of pain.

Have not all great and divinely inspired teachers repeated over and over again this great truth, and endeavoured to point out to man the way of escape from this restless striving, from the illusion which brings them back again and again into incarnation ? Yet still it would appear that the race as a whole is but as the prodigal son, whose lesson is not yet learnt, whose face is not yet turned to his " Father's home." Were it otherwise, had all, or even the great majority, learnt to cease from self-seeking : the strife and conflict of man with man, and community with community, would not exist.

But even when the lesson has been learnt by the individual, and the man, renouncing his past, realises his true nature, and strives to reach *eternal* life : it would appear that the past must still cling to him as *cause* of much which he would otherwise wish to avoid—including reincarnation. As a man sows, so also shall he reap ; and let no man think that another shall reap that which he himself has sown. Another *personality* may perchance reap it, in another incarnation ; but that new personality is the same old individual, the same old Ego.

Let us now turn our attention for a moment to some of the actual phenomena which indicate to us the higher possibilities and powers which lie hidden or latent in the real inner man or Ego.

We have before us in Myers' book a vast mass of carefully verified facts which show not merely that the individual, when thrown back upon his own deeper consciousness or subliminal self, can produce therefrom knowledge and information totally lost to the normal or brain consciousness, but also that he can receive true and verifiable information of current occurrences

not obtainable through the ordinary sensory channels ; that he can see what the physical eye does not see, and hear what the physical ear does not hear ; that he can receive *telepathic* impacts which are apparently a direct communication of mind with mind, not merely between two incarnate individuals, but even from something which—eliminating all possible sources of error—can only be regarded as the definite individual consciousness of a discarnate soul or spirit.

Now it will be evident that in so far as abnormal powers or faculties can be manifested in or through the physical organism, they must be largely dependent in form and quality upon the receptivity of the organism considered merely as mechanism. It does not appear that in this respect the reception of telepathic impacts, for example, can be treated in any different manner from the reception of audible physical vibrations by the ear, or of light vibrations by the eye. If a telepathic message or impression comes through to the physical brain, it must effect there some modification of structure, and there must be some part of that brain which is capable of responding to the higher vibrations or modifications of substance on the higher Plane—even if it be no higher than the etheric—which must necessarily accompany the transmission of thoughts, ideas, or impressions, from one individual to another.

But in the case of very many of the most important abnormal manifestations of consciousness, we have to recognise that although their actual occurrence or manifestation in the organism must be mainly, if not wholly, dependent upon receptivity and structure of organism, there is this vast difference between them and the normal psychic activity of the individual. They do not enter the consciousness by way of the brain and sense organs, but rather they enter the brain by way of the consciousness, by way of some higher or deeper part of man's nature, and only filter through, as it were, into the brain, losing in the process much of their pristine clearness.

Now it would puzzle physiological psychologists to say what part of the brain it is which is capable of receiving a telepathic impact ; of receiving, that is to say, an impression not communicated by means of a sensory end-organ and its related nerve channels. The orthodox scientific creed has always been, that consciousness is dependent *in the first instance* upon sundry impressions conveyed to the brain by way of the sensory organs. The *mind* may work up these impressions

into all sorts of *presentations*, but they must have come into the mind, in the first instance, by sensory experience, either direct on the part of the individual, or acquired in the course of physical evolution, and handed on by heredity.

Haeckel speaks much of *presentation*, and defines it as "an internal picture of the external object which is given us in sensation—an 'idea' in the broadest sense" (*Riddle*, p. 42). He attributes this power of *presentation* even to the simplest unicellular forms of life; and indeed considers it to be "a general physiological property of *psychoplasm*." Psychoplasm, we may note, is a purely hypothetical invention of his own. It is the term which he has given "to that part of the protoplasm *which seems to be* the indispensable substratum of psychic life" (*Riddle*, p. 39). Yet even so—and we may readily concede that even in a single cell there may be some equivalent of the more highly developed brain and nervous system of the higher organisms, though this is beyond the reach of our microscopes, and is pure conjecture—it seems strange that any man can conceive that the nature of *presentation* itself is "explained" when it is traced back to its minimum manifestation in physical matter; and that when he has asserted that the *psyche* is "merely a collective idea of all the psychic functions of protoplasm," and the soul "merely a physiological abstraction like assimilation or generation" (*Riddle*, p. 39), he has "settled" the whole question as to the nature of thought and consciousness. The question, as we have previously indicated, is not one of *degree* at all; and if we would know the real nature of psychic activity, we can do so much better by studying it in its maximum than in its minimum.

Now it is precisely by studying it thus, by studying abnormal and exalted forms of psychic activity, that modern psychological research brings to light facts which absolutely negate such theories as those of Haeckel, and upsets altogether the orthodox psychology which regards sensory impressions as the indispensable preliminary of all mental or psychic activity. For in some of the highest or deepest states of consciousness into which the individual may be thrown, we have to recognise not merely the response of the brain to stimuli which do not come through the ordinary sensory channels; not merely what Myers calls a successful appeal to the subliminal consciousness of the individual, but also something which amounts to what he calls a "psychical

invasion," an actual *possession* of the organism for the time being by a psychic something altogether alien to both the normal and abnormal individual with whom we are dealing.

Following upon the old theories, it has been largely assumed by the critics, as well as by the exponents of telepathy, that the telepathic impact must come in the first instance to the brain itself, and be communicated thus from the organism to the mind or consciousness. But a careful study of this and other psychic phenomena will appear to indicate very clearly that it is just the reverse which is the real fact of the case ; that man possesses not merely psychic powers which do not normally manifest in the brain consciousness, but also a definite psychic body or organism—which must necessarily consist of matter of a higher Plane—and that telepathic information is received by, and comes through to, the brain from such higher psychic organism, instead of *vice versa*.

This is the most fundamental and radical result obtained by the newer experimental psychology, *i.e.*, that the brain receives impressions from a higher or inner region of consciousness ; that it is not merely a mechanism which responds to vibrations conveyed to it through the sense organs and channels ; that it is not merely capable of a *presentation* of objective experiences of the past ; but that it may be used by a higher psychic self which lies outside of and beyond the limitations of the physical Plane and the physical body ; from a self which knows, and sees, and hears on its own account on a higher Plane.

That higher psychic self is independent of the physical brain. It can see without the eye, and hear without the ear. It may bring through, and impress upon the physical brain, knowledge which has never entered the brain by any of the sense channels. It can take cognisance of events happening thousands of miles away, and impress its knowledge upon the normal personality in such a way that the individual apparently sees with the physical eye the event which is at that moment taking place ; or which possibly took place previously ; or even an event which has not yet taken place on the physical Plane, but which does actually occur at some future time.

It is not difficult to understand why such information, coming through to the normal brain consciousness, should so often appear as an actual visible or audible phenomenon ; as if, in fact, it were a physical reality. Brought down into the

brain consciousness, that which the higher vision sees is there associated with the physical organ which normally fulfils that function ; and while in reality there is nothing visible within the range of the physical eye, it is apparently by means of that organ that the individual sees what he does.

This appears to be well illustrated in the case of crystal gazing. The pictures seen in the crystal have, of course, no real objective existence there. They are for the most part the objectivised contents of the subliminal self. Scenes and events long since forgotten by the normal personality may be thus reproduced. All sorts of odds and ends in the " lumber-room " of the subliminal may come to light, objectively visible once more to the normal man. Whatever, in fact, comes through to the physical brain from the higher psychic faculties of the individual, is largely or wholly represented or interpreted in the conventional language of the brain, and thus produces not merely what is—physically—an hallucination, but also what is often intellectually unintelligible, or even absurd.

Physical happenings, seen clairvoyantly or telepathically communicated, can, of course, be clearly described ; for the brain is here dealing with familiar things. But it would appear to be quite otherwise when an attempt is made to describe in terms of physical Plane consciousness the conditions and happenings of a higher Plane. Here a double difficulty must present itself. In the first place, that which is seen has probably no physical counterpart or analogy ; and in the second place, it will be largely coloured or distorted by the conventional ideas or brain images of the recipient or seer. This is especially the case when the subject is tinged with religious emotion. The real inner vision or ecstasy of the soul is invariably presented in the conventional language or imagery of the religion of which the subject is a devotee.

We have previously seen—indeed, it is the basis of all Monistic philosophy—that just as we are compelled to postulate one ultimate unitary substance at the root of all *objective* phenomena, so also we are compelled to postulate one Absolute Unitary Consciousness at the root of all *subjective* phenomena. The problem which at present we cannot solve, is the how or why of an appearance of separation or individualisation in this Unitary Consciousness, or Universal Subject. We have it before us as an empirical fact that such apparent separation

does exist ; it exists in our own individual consciousness, in that which we call *ourself*, and which appears to be separate and distinct from other selves.

But along with this sense of separation we have the equally strong impression that at least *we* are something unitary. Surely that which I call *myself* is *one*. I cannot be other than myself, nor can *others* be myself—so long as they are thought of as *other*. Those who are least familiar with metaphysical problems will be the readiest to assert this unitary nature of the conventional self ; the identity of the self through innumerable *physical* bodily changes.

Show to such a one a photograph of a wee, tiny, puling infant : and he will even assert that it is a photo of *himself*. Take him a few stages further back in the direct line of physical continuity, to the germ-plasm : and he will probably repudiate the relationship. At what stage, then, in the physical line of continuity—which stretches back to the primordial protoplasm —did he begin to be *himself* ; or what is it which gives him at the present time such a deep-rooted conviction that he is himself, and none other ?

Now, strange to say, the new psychology brings to light facts which entirely negate this deep-rooted conviction ; or perhaps we should rather say, that while the conviction of unity must remain, we find at the same time within that unity an empirical fact of diversity, corresponding precisely within our own *self* to the larger universal problem of diversity in unity.

From the apparently simpler phenomena of varying states of consciousness, and the reception by the normal personality of information or sensory impressions abnormally conveyed, as in clairvoyance or telepathy, we have to pass to a large class of phenomena in which there is a veritable *psychic invasion* of the organism by something which can only be described as a different *segment* of the unitary self ; a segment so different, indeed, that it possesses its own independent stream of memory and consciousness, quite distinct from that of the normal personality—or else it is an altogether distinct and alien personality, yet acting in and through the organism which the individual normally calls *himself*.

In many cases which have been studied by means of hypnotism, not merely one, but several such *segments* have been observed in one and the same subject ; and any one in

particular could be made to take control of the brain at the will of the hypnotiser. Such are cases of what are known as double or multiple personality. These cases, however, may be said to have only a preliminary interest as establishing the fact that the brain may be thus invaded and controlled by an alien consciousness—alien, that is to say, to the normal stream of memory and consciousness, though perhaps not alien to the subliminal self.

It is, however, but one step from this phenomenon of multiple or alternating personality to that more generally known as possession, or mediumship, where the organism is entirely controlled by an altogether alien subject, which may possibly be that of a discarnate individual. In some cases, indeed, it would even appear that different parts of the organism can be used simultaneously by two distinct entities or subjects : the hand being used by one to produce automatic writing, whilst the voice is controlled by another, and gives information on a subject totally disconnected from what the hand is writing. Cases are also known in which the normal personality is controlling and using one part of the organism, whilst another part is controlled by some alien subject ; the hand, for example, producing automatic writing, the nature of which is unknown at the time to the normal person, who may meanwhile be engaged in reading or conversation.

There is, in fact, every evidence to show that in those deeper regions of the personality which Myers included in the term *subliminal*, there are certain *segments* (a term we must use for want of a better one) which have, as it were, an independent stream or continuity of memory and consciousness of their own ; independent, *i.e.*, of the normal brain consciousness, and operating constantly and continuously—on a higher Plane—apart altogether from the physical organism.

We find here, in fact, within our own personality or individuality, within the *self*—though still in an obscure and little understood manner—that great problem of diversity in unity which lies at the root of the whole World Process. We find, in fact, a *higher* consciousness—active and potent in its own manner, and on its own Plane—upon which the normal personality can fall back, as really and truly upon *itself* ; while commonly it is unconscious even of its existence.

To what, or in what manner shall we, in truth, limit our conception of the real nature of the human personality,

individuality, Ego, or Self? The more we study our own *inner* nature, the more it opens out to infinity. The more we realise the significance, even of that little knowledge which modern experimental psychology and psychical research has already brought to light, the more profound becomes our conviction that the self in man and the Self of the Universe are one and the same.

Experimental psychology and psychical research, groping in the hidden depths of our individual consciousness, is beginning to realise that those depths are as unfathomable as the outer depths of space itself—space which is the emblem, perchance the substance, of the Infinite Noumenon.

Psychical research is here confronted with exactly the same problem as physical science, in the endeavour of the latter to penetrate to the root of the objective phenomena of matter and energy. Physical science is now groping about for a solution of the problem of the relation of physical matter to the etheric Plane; psychical research is groping for the relation of consciousness to the psychic activities of the individual, operative on the same Plane—more commonly called in this connection the *astral* Plane.

It is the Plane which lies just beyond the reach of the physical senses and normal consciousness, but upon which all our psychic activity is immediately dependent: just as all physical energy is immediately dependent upon the nature and structure of the Ether.

No doubt experimental science will some day know as much about the correlations of matter and energy on the etheric Plane as it now does on the physical Plane; and no doubt also we shall one day be normally as conscious on that Plane as we are to-day on the physical; for what is now abnormal and exceptional in consciousness, points the way to what will presently be normal.

Then, when the present mystery of the etheric Plane is no longer a mystery, but familiar and commonplace science, we shall be inquiring into the mystery of the next higher or mental Plane, as one which stands in exactly the same relation to the etheric as the etheric now does to the physical.

But in truth there is a much nearer road, than along this inductive line, to a knowledge of the secrets of nature and the real relation of man thereto.

For as consciousness transcends matter, so does the

Higher Science transcend the slow and cautious methods of modern inductive science, the mere knowledge of phenomenon in and by itself.

Ages ago the Higher Science had already immeasurably surpassed the feeble efforts of modern psychical research; and though we have, in this chapter, so largely identified the latter with the former, we have only done so as an indication of the *possibilities* of a deeper knowledge.

The Higher Science is the science of life and consciousness itself. It cannot be learnt in the laboratory, for it is not a matter of physics and chemistry, or even of psychical research. It is the science of man's inner nature; the science by which man knows *himself*, and not merely his phenomenal form—and, knowing himself, knows the Universe.

CHAPTER XVI

THE HIGHER RELIGION

" What can man accomplish that is worth speaking of, either in life or in art, that does not arise in his own self from the influence of this sense for the Infinite ? Without it, how can any one wish to comprehend the world scientifically, or if, in some distinct talent, the knowledge is thrust upon him, how should he wish to exercise it ? What is all science, if not the existence of things in you, in your reason ? What is all art and culture, if not your existence in the things to which you give measure, form, and order ? And how can both come to life in you except in so far as there lives immediately in you the eternal unity of Reason and Nature, the universal existence of all finite things in the Infinite ? "—SCHLEIERMACHER.

CHAPTER XVI

THE HIGHER RELIGION

THE Higher Science is also the Higher Religion.

Religion is nothing if it is not a practical knowledge and realisation of the relationship which exists between Man and God, between the self in man and the Universal Self; and it is precisely that relationship, as a fact of consciousness, with which the Higher Science deals.

The religious instinct in man, however, outruns its scientific development. Commencing with the very crudest conceptions as to the nature of God or Deity, it expresses itself in primitive forms of the most materialistic and superstitious character, and rises gradually through many stages and phases of form and expression to the lofty heights of a transcendental philosophy which realises the Unity of the Universe, and which boldly claims for man, on that basis, an essential and substantial oneness with that Divine Power which IS the Universe.

At every period of the world's history we may find all these stages and phases represented: simply because we find man himself at all stages of evolution. The loftiest conception of man's nature, which claims his substantial identity with the Universal Self, is not the product of modern science, modern philosophy, or modern religion. In the oldest literature in the world, in the ancient Sanscrit Vedas and Upanishads, we have this grand and final conception of the nature of man stated in the clearest possible language; stated as explicitly and concisely as it is possible for us to state it to-day.

This fact is now obtaining very wide recognition among writers and thinkers of all classes. Fifty years ago very little indeed was known about the Sanscrit literature and the Vedic philosophy. Thanks, however, to the indefatigable labours of a few students and scholars, we now possess not

merely accurate translations of most of the works which have so far been discovered, or which are accessible for that purpose, but also an excellent knowledge of the fundamental principles of the ancient Aryan philosophy embodied in those works, and in the present-day traditions and religions of the Eastern Races.

In this connection we cannot do better than quote a few sentences from an exceedingly interesting work by the late Professor F. Max Müller, entitled, *Theosophy or Psychological Religion,* wherein he shows this fundamental idea of the unity of the individual soul with the Universal Soul, existing as an underlying stratum of pure truth in the most divergent systems of philosophy and religion in all ages.

Referring to the ancient Vedic system he says :—

"Let us remember that the Vedânta-philosophy rests on the fundamental conviction of the Vedântist, that the soul and the Absolute Being or Brahman, are one in their essence" (p. 282).

"If we ask what was the highest purpose of the teaching of the Upanishads we can state it in three words, as it has been stated by the greatest Vedânta teachers themselves, namely, Tat tvam asi. This means, Thou art that. *That* stands for what I called the last result of Physical Religion which is known to us under different names in different systems of ancient and modern philosophy. It is Zeus, or the Εἷς Θεὸς, or τὸ ὄν, in Greece; it is what Plato meant by the Eternal Idea, what Agnostics call the Unknowable, what I call the Infinite in Nature. This is what in India is called Brahman, as masculine or neuter; the being behind all beings, the power that emits the universe, sustains it, and draws it back again to itself. The *Thou* is what I call the Infinite in Man, the last result of Anthropological Religion, the Soul, the Self, the being behind every human Ego, free from all bodily fetters, free from passions, free from all attachments. The expression Thou art that, means Thine Âtman, thy soul, thy self, is the Brahman, or, as we can also express it, the last result, the highest object discovered by Physical Religion is the same as the last result, the highest subject discovered by Anthropological Religion; or, in other words, the subject and object of all being and all knowing are one and the same. This is the gist of what I call *Psychological Religion,* or Theosophy, the highest summit of thought which the human mind has reached, which has found different expressions in different religions and philosophies, but nowhere such a clear and powerful realisation as in the ancient Upanishads of India" (p. 105).

"We must remember also that the fundamental principle of the Vedânta-philosophy, was not 'Thou art *He,*' but Thou art *That*; and that it was not Thou *wilt be,* but Thou *art.* This 'Thou art' expresses something that is, that has been, and always will be, not something that has still to be achieved, or is to follow, for instance, after death" (p. 284).

Here, then, we have the evidence of one of our foremost scholars as to the attainment in the far remote times of the Vedas and Upanishads of a religious philosophy which may truly be said to be " the highest summit of thought which the human mind has reached." More than that, he shows the same fundamental and profound truth permeating many diversified systems which, in their historical, traditional, or exoteric forms, would appear to teach the direct antithesis of this.

Nowhere is this antithesis more noticeable than in the traditional or ecclesiastical forms of Christianity. *Exoteric* Christianity deals principally in futures. In *exoteric* Christianity God is eternally separated from man as a creator from that which He has created, and with which He can do as He pleases. In *exoteric* Christianity man is separated from God by ' original sin,' and needs a ' vicarious atonement ' to save him from the consequences thereof. In *exoteric* Christianity man can never, even in the eternity of eternities, do more than dwell in the presence of God as one might dwell in the presence of an earthly potentate. *Exoteric* Christianity is, in fact, the *materialisation* of spiritual truth, whereby it is wholly limited, conditioned, and expressed in terms of the material and temporal ; in terms of time and space and our present sense consciousness ; in terms of the mere external *appearance* of things.

It is, of course, inevitable that in religion, as in all else, there should be an *exoteric* form of apprehension, as well as an inner hidden or *esoteric* truth to which only the few can penetrate. The great bulk of mankind at their present stage of evolution cannot see or understand more than the proposition that things *are* what they seem ; and to such the invisible world, or any ideas connected with a possible spiritual life, must be represented in familiar terms of time and space and matter. Thus even the doctrine of a material hell may have its uses. The mischief does not lie in the fact that the Church teaches an *exoteric* form of doctrine to the " spiritual babes "—that is only right and proper, for both Jesus and Paul did the same. The mischief lies in the fact that the Church *has nothing more to offer* to those who have reached or are reaching spiritual manhood. Its leaders and teachers are not *Initiates*, though they may be very saintly and learned men. They do not really *know* more of

spiritual facts than the man of science—often very much less.

The Christian Church in the early centuries rejected the *esoteric* doctrine of its own Founder, and has now no knowledge of it whatsoever except as a *heresy*; consequently, those who require it have to look for it outside of the Church. It is still to be found, however, in the original teachings, if one can penetrate beneath the mere dead letter and historical narrative.

All *forms* of religion are man-made. They are *how* certain races, nations, or communities represent to themselves the relationship of the soul of man to the Infinite; to that which apparently lies outside and beyond the individual, and is vaguely felt, even in the very lowest religious instinct, to be *something*: a Power which must be reckoned with, even if only in a propitiatory manner.

In all ages, as to-day, religion has existed in *exoteric* forms, as well as in the understanding of those who have penetrated beneath the form and appearance of things to the underlying reality. And because these *exoteric* forms are man-made, because they are the faithful expression or reflection of the general level of human evolution in the race or community to which they pertain, so also—since the general level of attainment is itself never constant, but is ever rising or falling in accordance with the great cyclic laws of human progress—*exoteric* religion is ever in a state of flux; and to-day the *orthodox* are sad and depressed because the old forms of Christianity are being more and more repudiated, and all that they hold to be essential to Christian faith and tradition appears to be in danger of passing utterly away.

Well—let those who would be orthodox be orthodox still; it is probably the only safe way for them. Yet could they but read the signs of the times, and the lessons of history, they would see in this breaking-up of the old forms a wonderful spiritual awakening. Those who have followed the flux of Western conceptions of truth, religious and scientific, during the past fifty years, and who carefully study the trend of thought at the present time, cannot fail to have noted how the desire for more light, more truth, on the part of a very large section of the community is leading them to the inner *esoteric* teaching which has always existed within or beneath the *exoteric* accretion of creed and dogma. The old forms or statements of truth are not being abandoned

for irreligion and denial of spiritual realities—though much of that is still prevalent—but for new-old statements of truth which are found to be more in line with our increased knowledge and conceptions of the nature of man and his environment, and a deeper realisation of the dignity and power of man's inner nature.

It is no part of our task here to enter into the controversies of to-day respecting special forms of Christian faith or doctrine. In the early centuries there existed an *esoteric* Christianity which the Church repudiated and rejected. The dark ages of superstition, ignorance, persecution, and unspeakable horrors perpetrated in the name of Christ were the direct result of the materialisation of the pure spiritual teachings of Jesus of Nazareth, Paul of Tarsus, and other Initiates.

In connection, however, with our fundamental principle of the oneness of the self in man and the Self of the Universe, it may be interesting here to quote the words of the Rev. R. J. Campbell, whose association with the so-called 'new theology' has lately been arousing so much interest and controversy.

In a report of the proceedings of the Summer School held at Penmaenmawr, 3rd to 9th August 1907, we find him stating, that in searching for the solution of the great problems of existence and divinity, he has found himself thrown back upon a philosophy which is much older than Christianity itself:—

"At least five thousand years ago the fundamental principle of this philosophy was enunciated as clearly as it can be stated to-day. It is that this finite universe—finite to our consciousness, finite to a finite mind—is one means of the self-expression and self-realisation of God. To all eternity God is what He is, the unchanging reality which underlies all phenomena, but it will take Him all eternity to manifest what He is even to Himself."

"By the self of any man I should understand his total consciousness of being. If there be any other consciousness which knows more of the universe in relation to him than he does himself, that consciousness ought to be regarded as his own deeper self because it includes his self-consciousness. Now there can be nothing in the universe outside of God. God is the all-inclusive consciousness, and, therefore, the Self beneath all selves."

"I do not see how from the side of God there can be any consciousness of separateness between Deity and humanity, but from our side there certainly is. Surely the goal of human effort and spiritual aspiration means getting rid of this sense of separateness, and this can only

be done by the deliberate and consistent giving of the self to the whole at every step in our upward progress."

These passages are characteristic and expressive of a general trend of thought and teaching at the present day, both within and without the Christian Church. Atheism, scepticism, and materialism may be said to be prevalent only among those who, having recognised the inadequacy and intellectual weakness of the traditional presentations of Christian doctrine, and the anthropomorphic conception of God to which the Church still clings, have yet nothing else to put in place of these *exoteric* representations. Nevertheless, the breaking-up of the old forms and formulas is also largely due, not to a denial of spiritual realities, but to a deeper perception of the same, to a demand for a wider truth and a clearer statement of the relation of man to the unseen universe.

And for those who thus seek, a deeper truth is ready at hand. It has always existed, always been understood by the few; only—a man must really need it, and earnestly seek it before he can find it.

If the present world is sufficient for the individual, or if the present forms of religion are an adequate representation or reflection of his present powers of reception of truth; if he can see things just precisely in *that* relation and proportion, and no other: then there is neither need nor advantage in offering to him a deeper knowledge. If you do, he will probably turn again and rend you for endeavouring to pull down his idols and shibboleths.

Professor Max Müller defines religion in its widest sense as "the Perception of the Infinite"; this being "the one element shared in common by all religions."

This, however, he states is only a preliminary definition; and he is careful to show that religion in its truest sense is the consciousness and realisation of the essential unity between the Human and the Divine; a unity "which has been severed by the false religions of the world." Thus religion is essentially *active*, not passive; it is not merely a *perception*, but also a *participation*; a participation, *i.e.*, in the conscious activity —the creative potency—of the One Life, ever bringing *Itself* into manifestation.

Now it has been our principal endeavour in this work to show how this essential unity may be realised when approached

from the purely scientific point of view, from the logical deductions which we must make from those fundamental principles at which science has arrived by a study of phenomena and the so-called *laws of nature.*

Science, rightly understood, must inevitably strengthen the inner intuition and conviction of a relationship between man as a conscious being, and the Infinite Being or Be-ness which finds expression in the phenomenal world from which man is inseparable in his nature. The fact of that relationship is the root of all science as well as of all religion. We have the firmest possible conviction that science can never obscure, but only disclose in ever greater degree, the immeasurable fulness of man's nature—be the temporary scientific orthodoxy what it may.

Science must inevitably strengthen our inner conviction and *faith,* because, in the first place, it helps us to realise man's connection with the Infinite as an actual physical fact. All physical phenomena, in modern scientific conceptions of matter and energy, are modes of motion of the infinite, eternal, and indestructible Primordial Substance ; and we cannot conceive of man's *body*—on any Plane whatsoever—as being other than one in substance with the *body* of the Infinite—if such, indeed, we may term Primordial Substance, considered only as the *objective* aspect of the One Absolute Principle.

Then comes the question, what are we subjectively, in our life and consciousness ?

The answer must inevitably be the same. Life and Consciousness are either inherent in Primordial Substance ; they are either the complement and correlative of phenomena : or else they belong to a *spiritual* order of things which is supernatural, and has no necessary or intrinsic connection with the phenomenal side of the cosmos.

This latter view, however, as establishing a *duality* of spirit and matter, instead of a *unity,* falls short of " the highest summit of human thought " ; and as it is thus outside of all that is best in science and philosophy, so also it is outside of all that is best in religion : it belongs to *exoteric* forms of religion, to the false conceptions of religion which would eternally separate the nature of Man and God, and not to the higher or *esoteric* religion in which these are seen and known as *one.*

When we have clearly understood that no possible combination or complex of *dead* matter can manifest those qualities

which we know in ourselves as life, thought, perception, consciousness ; that since an unconscious atom cannot be *aware* of the presence of another atom ; that since no structure or organism, *considered merely as an aggregate of such atoms,* could possibly be *aware* either of itself or of an external world—we clearly perceive that life and consciousness must be inherent in matter itself, or rather in that which sub-stands matter ; in that *substance* of which matter, as we know it, is only a very limited mode or manifestation.

Both objectively and subjectively, therefore, we are manifestations of the inherent nature of that which *sub-stands* the whole Universe ; of the One Absolute Noumenon, by whatever name we may call it—the Infinite, the Unconscious, the Unknowable, Primordial Substance, Brahman, Jehovah, or God. The name is nothing, the principle everything.

Our individual consciousness, giving us a sense of separation, is apparently the result of an outgoing, differentiating process which is the essence or essential of phenomena. Individual consciousness is apparently associated as the inevitable complement or correlative of individual phenomena.

But if evolution means anything for the individual, it means that this separation is only apparent, not real ; that it is only temporary, not eternal.

Evolution means essentially expansion of consciousness ; and here again, if we can read the phenomenal side of the universe aright, if all forms of matter on all possible Planes must have emanated or differentiated from or in the Primordial Substance, and by a cyclic process must at some incalculably distant date return thereto : we shall read in this external process the sign and symbol of the internal fact ; the certainty that, since the great cosmic process has carried the Self outwards into the illusion of separateness and phenomenal existence, so also it will bear it back to a full realisation of Its infinite and eternal nature.

When the whole phenomenal universe is redissolved in that Primordial Unity, where, then, wilt *thou* be ? Nothing which *really* exists can ever cease to *be* ; and if thou *art,* thou art *eternally.* " *Thou art That.*"

Esoteric religion, then, joins hands with monistic science and monistic philosophy. It has nothing to do with man-made doctrines of heaven and hell, of original sin, or vicarious atonement. It rests upon the inherent and essential oneness

of the self in man and the Infinite Self, upon the great structural facts of the Universe.

It will be clearly perceived, therefore, that religion in its truest, deepest, and widest sense means the return or reunion in consciousness of the individual self with the One Self ; the emergence of the individual from the illusion of time and space and matter into which he has fallen ; the negation of the nescience of separate existence ; the affirmation of the inalienable and inseparable *oneness* of the Infinite Self.

All that ministers to this is religion ; all that hinders it is irreligion. Thus the whole of that part of the great cosmic process which we term *evolution* is religious in its nature. All evolution is religion, for it is a re-unifying. It is the *return* half of the complete cosmic cycle, which must be an involution as well as an evolution, a fall into matter, differentiation, individualisation, separation, or illusion, before it can be a *redemption* or return therefrom. But both the *fall* and the *redemption* are part of the One Divine Nature.

All evolution is religion because it is a re-becoming. There are many religions, but only one Religion—which includes all others as being the root, the motive, the inspiration, the impelling force of all. Does any individual religion make for the realisation of *unity* ?—then it is true. Does any make for separation, individualisation, exclusiveness, either between man and man or between man and God ?—then it is false. However much a religion may profess to bring man to God, if it separates man from man it is false.

Yet even here, in the conception of the *cosmic* nature of Religion, we must recognise that true and false are only relative terms. In so far as the outgoing, differentiating, centrifugal half of the cosmic process must be just as much a part of the Divine Whole as is the ingoing, unifying, or centripetal half : the one is no more false than the other ; and this same principle, that the Whole is Divine, we must also apply to lesser cycles, and to human experiences which, seen in a limited manner, seen by themselves and out of all relation and proportion to other cycles, or to the Whole, we should be inclined to regard as essentially or absolutely evil.

Evil, we repeat, is essentially limitation and negation ; but limitation and negation are just as essentially a mode of expression of the One Life and Consciousness as are freedom and affirmation. Such, at least, must be the logical deduction

from our fundamental premises. Doubtless in a higher state of consciousness and a fuller knowledge, both our premises and our conclusions will vanish.

Religion is essentially active, not passive. It is life, experience, evolution, expansion. It is life temporal, evolving into life eternal—not as any historical event, but as a *quality* of life. It is life in which we only know in part, evolving into life in which we know in full. It is life limited, conditioned, fettered, and fatalistic, evolving into life full, free, unconditioned as the Infinite Itself. It is the *Self* realising Its own Infinite Nature.

Religion is—or ought to be—the crown of science and philosophy; the *practical* achievement to which these two should minister and direct our energies. Religion is—or ought to be—the most *practical* thing in our lives; for what can be more practical than the realisation of our own nature and powers? In the higher religion there is no distinction between the sacred and the secular, for every act and motive in life becomes religious. Touched with the magic potency of a will and desire wholly given up to the divine will and purpose, *evil* ceases to have any power whatsoever over the individual. Evil ceases in proportion as we realise our true nature; not merely because such a realisation gives us more and more power to command and rule where we were formerly enslaved, but also because it gives us power to submit to the higher will and purpose manifested in the cosmos of which we are a part. It enables us to realise that if now we only know ourselves in part, such limitation is a necessity of *our divine nature*—for the human is never *in reality* separate from the divine.

In perfect self-knowledge all so-called *evil* must vanish. Pain and suffering result from ignorance of natural law. So also the darkness and unrest of the mind is due to ignorance of our true spiritual nature, while grief arises when the individual, having centred his energies and desires on some particular object or temporary form, finds it slipping from his grasp, or, perhaps, suddenly destroyed or removed from his ken. Then, because the whole desire of life was centred on a temporary form, his very being seems to be uprooted, to melt into nothingness; and grief and despair, twin phantoms of the mind, take possession of his soul.

But perfect knowledge of our own nature must bring not

merely perfect control of all the forces in the universe, and therefore immunity from all pain or suffering, but also perfect freedom from all illusions of separate form and existence; it must bring a perfect non-attachment to the temporary and finite, and therefore perfect immunity from all sorrow and grief. Man can only be injured through his attachments, through that which he endeavours to appropriate to himself as an individual separate thing.

True religion should accomplish in us the perfect non-attachment which can use all forms, yet in nowise be bound thereto by desire; for true religion recognises the One Life working in ALL, even in the conflict which must be ceaselessly waged between good and evil, or spirit and matter, the two opposite poles of the ONE. Does our conflict now appear to be a conflict with *others*?—look deeper, and you will find it wholly resolved into a conflict with *yourself*. When you have conquered yourself, you will have accomplished your evolution, and conquered the universe.

The two primary elements of religion are sometimes represented as faith and conduct. Faith is the mainspring of all real effort, the incentive to all successful accomplishment. There is perhaps only one thing which is its equal, possibly its superior. That one thing is Love; but the deep ground of faith is perhaps hardly to be distinguished from the love of the soul in its "perception of the Infinite."

But faith is too often confounded with mere *belief* in certain traditions or dogmas. Faith is infinitely stronger and deeper than mere belief. Faith is the inner conviction and witness, the impelling power, the *substance*, which may take form in an infinite variety of doctrinal beliefs. Belief is only an accident of faith; the more or less adventitious assent to some transient mode of religious expression. Faith makes a man religious; belief only makes him a religionist. Probably most good Christians would have made equally good Buddhists had they been born in a Buddhist community. Forms of religion are only temporary pegs on which men hang their religious instincts—often in order to save themselves the trouble of wearing them.

Beliefs change and die, but faith grows ever stronger and more assured with every advance that a man makes in his evolution. Beliefs belong to the horizontal line of progress;

faith is the vertical line of direct connection with the Eternal I AM.

But faith, ever springing up in new forms of belief as man evolves and knowledge increases, is too apt to outrun reason, and to assume strange forms of superstition and supernaturalism. Faith needs to be balanced by science and philosophy; true religion can never be divorced from these.

So strong is the religious instinct in man, however, so insistent the inner compulsion, that religion cannot wait for the slow inductive methods of science and philosophy, but must needs press forward into the unknown and unseen with straining eyes, and ears keenly alert for any voice which may seem to speak with authority from out the vast silence of the 'other world.'

Moreover, religion embodies a quality not necessarily associated with the mere intellectual apprehension of truth—the quality of emotion; and emotion is apt to play the mischief with logic and reason. Thus in religion, more than in anything else, man is prone to abandon reason, to listen to the voice of authority, and to become an easy prey to fraud, deception, and priestcraft. A *fear* of the unseen rules in the heart of the ignorant man, and the unscrupulous have never failed to trade upon it.

All individual forms of religion, however, must necessarily contain some element of abiding truth; and, just as necessarily, a finite element which is only true within certain limitations. Accept the limitations, and you may be perfectly logical and sane within your own particular form, though outside of those limitations your religion is false. Every religion is true to its own devotees, because it represents *their own* particular limitations or stage of evolution. To other religionists whose limitations are different, your religion is false.

To grasp the real *substance* of religion we must decline to limit ourselves to any particular form, doctrine, or dogma; though we may employ these—even such as appear in their *exoteric* form to be absolutely contradictory—when once we have discerned the nature of their limitations, and can thus use them for what they are worth without being bound by them.

Nothing which is limited can be true in any final or complete sense; it can only be *relatively* true. Any religion, therefore, which only takes account of *some* of the factors of

human experience, or which would in any way limit man's nature and powers, must be rejected by the real truth-seeker. " Thou art That "—and *That* has no limits.

The beginning of religion is the dawning consciousness of a relationship between the individual self and the Infinite Self. The end of religion is the complete realisation *in consciousness* that this is not a mere relationship, but an identity.

Between these two poles of religious experience there must be varieties of expression as innumerable as man's individual consciousness. If we could mark off the gradual process of evolution in the individual into well-defined stages, we should find an appropriate form of religion corresponding to each stage.

Of a truth there are many sciences, but only one Science ; many philosophies, but only one Philosophy ; many religions, but only one Religion. And finally there is neither Science, Philosophy, nor Religion, but only One Truth which includes them all.

Nothing which is limited or conditioned can satisfy our final sense of proportion ; can satisfy our final consciousness of our own nature. We cannot even limit ourselves to time and space ; we must get beyond these, to a truth which is timeless and spaceless. Historical events do not *determine* our nature or destiny ; they are only the fulfilment or mode thereof. The nature and destiny of man was fixed before ever the worlds took form or shape.

The final truth is a unifying, not a differentiating or discriminating one. All phenomena, all states of consciousness, are true as part of the great Whole, not merely a few which individual forms of religion may choose to select. To recognise the limitations of the limited, and the finality of the finite, is the beginning of truth. To know the Self living and moving in ALL, is the sum of all knowledge, and the end of all evolution.

Philosophy and religion have proclaimed this final Truth in no uncertain voice in all ages, but the message has for the most part fallen upon deaf ears ; for the complete understanding and realisation of it involves many things on the part of the finite personality which that self-willed entity, with its load of conventional ideas and inherited physical tendencies, is by no means inclined to accept at its present stage of evolution.

The practical realisation of our divine nature would make of us—gods. And many such, indeed, there are, who—having passed through all the human stages, even as we are now passing—are beyond the ken of mortal eyes, but who nevertheless reach down strong hands for the helping and saving of humanity. And now and again, as the evolution of the race may demand it, one such may incarnate in the flesh, and body forth even in human form the divine attributes and powers of the perfect man, so that men marvel and say, " truly this was the Son of God."

And even such must each and all become in that unfolding which we term the evolution of Man ; for the perfect Man is contained in the 'seed' from the beginning, and Man (Humanity) must reach the full measure of his stature, as certainly as the plant, or the tree, or the individual evolves from the parent germ.

But the Self in man, the living conscious active principle which *moves* in all, can never be separated from, can never be other than ONE with THAT.

To realise this intellectually is the crown of philosophy ; to realise it practically, so as to be able to *act* in the power of that knowledge, is the goal of Religion. If we can but grasp this fundamental Truth with our whole *being*, so that it becomes within us a *living* truth, we shall find that we have in our hands the master key which will unlock for us one by one the doors which lead to the inmost sanctuary of the Temple of Truth—" which Temple ye are."

To realise our own divine nature is to establish within ourselves a centre of stability from which nothing can remove us. That centre of stability must lie in something which is *permanent*, in something untouched by time, unaffected by phenomena, even though the actor and doer therein. The secret lies in non-attachment. The actor and the doer is the One Self, but that Self must remain ever immutable and unchangeable, the witness and the spectator, as well as the actor and doer. So also we, if we would rise above the vicissitudes of phenomenal life, must learn to establish ourselves in that higher centre of consciousness in which we become the unattached witness and spectator of our own acts, as well as the actor and doer. That centre cannot be found in the personal self, which is merely a thing of name and form, a phenomenal phantasm. Only in a realisation of our identity

with the One Self which lives and moves in all, can we rightly establish that immovable centre of stability. Then of us it may be written, as of others who have accomplished before us—

> "Him the three worlds in ruin should not shake ;
> All life is lived for him, all deaths are dead."

Even a small measure of understanding of this fundamental truth will place us at a standpoint from which we can view with perfect equanimity the inevitable flux and change of all *forms*, even those which were once perhaps to us the embodiment of all that we held most sacred, and which still remain so for a large majority of our fellow-men. We shall be removed far above the strife and controversy of creeds and dogmas ; above the noise and fume of those who, mistaking the form for the substance, cry, lo ! here, or, lo ! there. We shall learn gradually to dwell in thought and consciousness in the Infinite and Eternal, not in the temporary and finite ; and, opening up thus our mind and consciousness to the true nature of our real Self, of our inner divine power and potency, that divine nature will be brought to birth or manifestation within us ; it will well up, so that we shall drink of the living water of life, drinking which a man shall thirst no more.

Creeds, religions, races, nations—ay, worlds, and systems, and universes—change and pass away ; but the Self is "not this," "not that." The Self, as *Cause* of all these, is changeless and eternal, and—Thou art That.

CHAPTER XVII

THE HIGHER AND THE LOWER SELF

" The Law of Continuity furnishes an *a priori* argument for the position we are attempting to establish of the most convincing kind—of such a kind, indeed, as to seem to our mind final. Briefly indicated, the ground taken up is this, that if Nature be a harmony, Man in all his relations—physical, mental, moral, and spiritual—falls to be included within its circle."
—HENRY DRUMMOND, *Natural Law in the Spiritual World.*

CHAPTER XVII

THE HIGHER AND THE LOWER SELF

We have now climbed by way of modern concepts of matter and energy to a lofty Idealism which is found to be in harmony with all that is best in what the world has ever known in Philosophy and Religion, as well as in Science.

This Idealism may possibly claim our attention and our assent, in the first place, merely as a likely theory or working hypothesis—as an intellectual statement which satisfies our logical faculty, but without appealing very strongly to our deeper emotional nature. Later on, however, it may become a profound conviction of Truth which must influence every thought and action of our lives; giving to the heart, as well as to the mind, the fullest satisfaction and freedom; opening up, as it does, an unlimited prospect of an infinite fulness of life and consciousness, which we may immediately commence to realise in thought and action.

For this Idealism, if steadily pursued, must assuredly pass to a true *realisation*; it must pass from the region of theory to that of knowledge, a true knowledge of the Self and its powers. From the region of emotion also it may pass to a higher and deeper satisfaction, for which, perhaps, we have no adequate word in the English language.

We have commenced our intellectual apprehension of this Idealism with a clear understanding of the two fundamental scientific concepts of the indestructibility of matter (or substance), and the conservation of energy (or motion).

We have found that these two concepts inevitably lead us to the further concept of an Absolute Primordial Substance, which must be the 'thing in itself' of all things, the Root of all phenomena; which must possess as its inherent and inalienable qualities or attributes all that can possibly account for, or be conceived of, as *cause* of the phenomenal universe; even if

that universe be conceived of in the first place merely as a *mechanism.*

But we find that there is in the universe, besides the mere apparent mechanism of objective phenomena, a *subjective something* which we term *consciousness*; and we find it impossible to conceive that consciousness *per se* can be the result or product of mere mechanism, can be the effect of any combination, however complex, of any *substance* in which consciousness is not as primarily and eternally inherent as motion itself.

We find that even Haeckel—most materialistic of modern scientists—is compelled to admit this; and that, in order to get out of the difficulty of reconciling it with his mechanical theory of the universe, he is forced back upon the postulate that "the two fundamental forms of substance, ponderable matter and ether, are not dead, and only moved by extrinsic force, but they are endowed with sensation and will."

An examination of Haeckel's position, however, has shown us that he never really reaches a fundamental Monism; that his system, at best, is only a distorted form of Dualism; or a Materialism masquerading in a fancy dress to which it has no right.

We have further found that since life and consciousness actually exist in the universe, and are as much subject of empirical knowledge on our part as are matter and motion—possibly even more so—we have two alternative theories to fall back upon as to their ultimate connection with objective phenomena.

We may postulate that life and consciousness are inherent in Primordial Substance; that the eternal and indestructible *motion* which we are compelled to attribute to that Substance, is on the one side *consciousness* or *subject,* and on the other side *phenomenon* or *object*; or, as an alternative, we may postulate that life and consciousness are *transcendental* in their nature; that they exist *per se,* and have no necessary or essential connection with phenomena—consciousness and phenomenon not being complementary or correlative, but existing as independent entities.

This latter position, however, we have seen to be dualistic, not monistic; and though the universe, to be sensible at all in any conceivable manner, must necessarily always exhibit a dualism of subject and object, consciousness and phenomenon,

or spirit and matter: yet we find that the mind is not satisfied to rest in any form of dualism as a *final* statement, but must needs reduce it to a Monism.

We are, therefore, compelled to accept the first of these two alternative concepts, and to postulate that consciousness must be a quality or attribute of Primordial Substance, or of that ultimate *Principle*, by whatever name we may call It, which *sub-stands* the Universe in its totality.

But consciousness, thus inherent in Primordial Substance, must, like motion, be *absolute*. We cannot attribute any partial or relative quality to that which we have already defined as an absolute Principle. Further than that, we cannot attribute to any *part* of that which is essentially a Unit or Monad a quality which is not inherent in the whole. Motion or consciousness must be inherent in *all* Primordial Substance, and therefore in all *forms* of that Substance whatsoever. This is the inevitable deduction from the empirical fact that we know these to be inherent in some forms, namely, in our own physical bodies. We may attribute different forms or modes of motion or consciousness to Primordial Substance, and those forms may and do appear as if they were *parts*; indeed it is only this variety or contrast which makes life and consciousness understandable at all. We might even postulate that an Infinite Absolute requires as its necessary complement or correlative an infinite relative, an infinite particular, an infinite phenomenal.

Science has no difficulty in understanding that there is no such thing as absolute rest; that where we apparently see no motion we are only dealing with an appearance *relative* to our present senses; that a body apparently at rest is so only relatively to some other body, and not absolutely so; and that in the invisible regions of the ether the actual motion or activity is immeasurably greater than in the visible region of physical matter. Absolute rest is, in fact, only to be found in absolute motion.

But science has not yet arrived at the same deduction as regards consciousness. We find consciousness inherent in so-called *organic* forms, but in inorganic matter, and in the invisible regions of space, filled with Primordial Substance in many other modes and forms, we lose touch and recognition of it.

Yet the postulate that consciousness must be inherent in

all forms of Primordial Substance, rests upon the same basis as that of motion. If consciousness can manifest in some forms or modes of that Substance, it must be present in all forms, whether we recognise it or whether we do not, simply because Primordial Substance is by hypothesis ONE. The alternative is, that what we now call *consciousness—i.e.*, subject as distinguished from object—is itself only a mode, aspect, or attribute of a higher *something*—of *Being*—which, if it could be known *in itself*, would certainly *not* be anything such as we now know as consciousness ; just as Primordial Substance, considered as the *Root* of Matter, is certainly *not* anything resembling matter as we know it.

Primordial Substance, considered merely as a homogeneous something filling all space, might conceivably be in a state of absolute rest in the sense of having *no motion* anywhere. But in that case, if motion were *commenced* in any part or portion of it, it would be because that part was *somewhat different* from the other portions where motion did not originate. To postulate this, however, is immediately to stultify our primary definition of Primordial Substance as being one and homogeneous. Whatever quality, therefore, is inherent in a part must be inherent in the whole.

We must bear in mind, however, in this connection, that just as certainly as Primordial Substance is *not* matter, or anything material or substantial in any sense in which we can at present understand these terms : so also motion *per se* is certainly *not* the mere movement of material particles or masses. So also consciousness *per se* must certainly not be anything resembling that limited and conditioned cognition of an external objective world which is all that we at present know as such in ourselves, and assume in others.

The fundamental quality, characteristic, or attribute of what we now call *matter*, is mass or inertia. But we derive our idea of mass simply through the *sensation* of resistance or limitation. What, then, is it which senses this limitation ? It is something which is essentially *not* matter, but the opposite of matter. It is, in fact, what we call consciousness, and our final definition of *matter* must be simply *that which is opposed or objective to consciousness* ; indeed, in that light, matter may be said to be simply a mode of consciousness. Consciousness and matter can never be said to be independent of each other in any final analysis ; the one must be the necessary

complement or correlative of the other, the two constituting the opposite poles or modes of a Unity which in itself is neither. We cannot find the *Reality* in either one of these considered separately; in any pair of opposites or correlatives the one must stand or vanish with the other. The extremes of Idealism and Realism must necessarily meet in any true Monism, both resolved in the ONE incognisable *Substance*.

There must be in the Universe innumerable forms or modes of motion not merely utterly unknown to us, but also utterly inconceivable to our present limited mind and consciousness. There must also be innumerable forms or modes of consciousness or *Being*, utterly beyond our present powers of conception or imagination. There must be *cosmic* forms of consciousness, Divine Beings, Gods, Creators: whose visible body or manifestation to our mere physical faculties is, indeed, seen in mighty flaming Suns, and Worlds, and Systems, and Universes; but whose invisible Life and Being is infinitely more, even that which is the *fulness* of space itself, the Might of that which *ensouls* the visible universe, and without which no single atom of matter could be formed, or could possess even mechanical motion.

The objective world of matter or phenomenon cannot possibly be a thing *per se*, a 'thing in itself.' We may redissolve it back through all the Planes to the One Root Substance, but even there—nay, precisely there, we must relate it to consciousness, or to that which is the *Root* of consciousness.

Neither can that subjective something which we call consciousness be a thing *per se*, a 'thing in itself.' It is the correlative or complement of the objective. Consciousness and matter (object) are the two primary aspects or modes of Being or Be-ness; of the only thing which can possibly be said to exist *per se*—the One Absolute Noumenon.

This One Absolute is the 'thing in itself' of all things. When the thing is seen in *all* its relations and proportions, it becomes THAT. It is not the old ontological concept of the thing stripped bare of all qualities, but rather the thing with all qualities raised to the infinite power. Conceived of thus, it can only be expressed by a paradox. The thing in *all* its relations and proportions has ceased to be a thing at all; the Absolute is no *thing* (not *nothing*).

The Absolute is the Self-in-Itself of all selves; it is the

Self free from all limitations; the Self which knows Itself in *all* Its relations and proportions, and which has, therefore, ceased to be an individual or personal self.

The One Absolute Self is neither subject nor object, neither spirit nor matter. It is the One Reality, the permanent, abiding, eternal Root of ALL.

When we have thus obtained a clear intellectual apprehension of the nature of the problem of the *Riddle of the Universe*, of the logical necessity of the terms in which we are at present obliged to state it, and of the reservations which we must make because of our present limited consciousness: we should be able to feel that in spite of these limitations we have a solid grip of a fundamental Truth which cannot fail us, however much forms or modes of expression may change; a Truth which must grow ever clearer and brighter with every fresh accession of knowledge, and with the natural evolution of our own powers and faculties.

But this Truth should be something more to us than a mere intellectual satisfaction. It should take possession of our nature as a living power, influencing every thought and action. We must begin to *realise* our oneness with the Infinite Self, to consciously act in the power of our divine nature.

That divine nature must become within us a *living* truth, it must re-create and regenerate the lower nature, the personality—ay, even the physical body itself.

We must ourselves *become* the expression of the great truth—Thou art That.

In a clear apprehension that we are *one* with the Infinite Power which IS the Universe, we must find, therefore, not merely an intellectual satisfaction, but must find, as the next result, an immeasurable stimulus and power to lift us to lofty regions of thought and action. We must find an incentive and a motive enabling us not merely to press forward to the fullest realisation of divine powers hitherto latent and unsuspected within us; not merely to claim our birthright to the divinest powers of the Universe, to claim as our ultimate and legitimate right *the freedom of the Universe*: but also that ready submission of the personal to the divine will—because that will has now become our own will—which enables a man to suffer and endure all, as well as to achieve all; knowing that all, even seeming evil, is of the divine will and purpose.

Before this great truth is realised, the lower personal nature

appears to be in opposition to the divine ; perchance it even appears to be something in need of ' salvation.' Yet the lower personal self is not a thing *per se* ; it is only an aspect, a mode, a portion of the life and activity of a larger divine nature, which we term the Higher Self. The lower self or personality is only a temporary phenomenon. Its separate selfness is an illusion ; its only real selfness lies in the One Self. What is it, then, in the personality which needs ' salvation ' ? Are we going to ' save ' a phenomenon ; one, moreover, which exists as a mode or manifestation of the One Divine Life ? Have we not indeed read that he who would save his life must first *lose* it (the lower personal self) ?

The relation of the lower personal nature—which we now conventionally call ourselves—to our higher divine or spiritual nature considered as an *individual* self, is, in fact, precisely that which in the universal pertains to the relation which exists between the phenomenal and the noumenal. The personal, limited, and conditioned, is merely a phenomenal aspect of the impersonal Higher Self. Man (Humanity) as we know him historically—even if we stretch his history to millions of years —is only a passing phase of a Divine Idea, which, as such, must be complete and perfect, having neither past nor future, but only an eternal NOW. Man, as we know him, is only a fragment ; MAN, as God knows him, in all his relations and proportions, must be a complete Whole. Man, as we know him, appears as something far distant from God ; MAN, as God knows him, is His own image and likeness. In MAN, God realises Himself ; and, because this is so, it is only in God that Man can realise himself.

An Infinite Absolute requires as Its correlative or complement an Infinite Relative, discrete, or phenomenal. Without such IT is unthinkable and unknowable ; and thereby it is already postulated that the great Cosmic Process is that whereby the Infinite Self knows and realises Itself in an infinite variety of ways.

The real Self needs no ' salvation,' for it eternally IS. The lower self cannot be ' saved,' for it is an illusion of time and sense. We might as well talk of ' saving ' our reflection in the mirror, as of ' saving ' the lower personal self. We repeat again what all great teachers have said—though perchance it is a mystic saying which only a few have understood—that the true Self can only be found in proportion as the personal self is *lost*.

A clear understanding of the principle that the above and the below, the divine and the human, are complementary and correlative : that even as the whole phenomenal universe must be necessary to the One Self, so the lower or personal self must be necessary to the higher or divine Self : will enable us to place ourselves at that standpoint from which the human—even with all its so-called evil—is no longer seen as antagonistic to the Divine.

Everything, even God Himself, must be known by its opposite. The opposite of the Absolute is the limited or conditioned. The opposite of God is the Devil, or Satan. " Demon est Deus inversus." Satan is the *alter Ego* of God. He is the ' adversary,' the cosmic differentiating, individualising, centrifugal force personified.

Let us now, however, return to the lower standpoint, to that of the personal self, and endeavour to understand wherein lies the apparent conflict between the higher and the lower, between good and evil, between the personal will and the divine will, which is such an ever-present and insistent factor in our daily thoughts and actions.

The lower personal or animal nature—the physical body and the animal-psychic nature—is the product of the phenomenal aspect of the ONE ; it has *evolved* out of the lowest forms of life, and even from apparently inanimate matter itself. It possesses no will of its own to rise or achieve, but only a blind *instinct* to perpetuate or intensify previous experiences. It is wholly the sport of what we call *circumstances*, the product of cosmic, solar, and mundane activities of which it is wholly ignorant, and with which, therefore, it does not consciously co-operate. It acts wholly for itself, for the preservation of its individual life and interests. The law of this lower life as exemplified in all organisms below the human, and in the human itself up to a certain point of evolution, is individualism, struggle for existence, and survival of the fittest.

The mere physical man has his own special evolutionary line of ascent and heredity ; and, as we have already seen, he must, in his development from the embryonic germ-cell, pass rapidly through all the previous evolutionary stages of the Race as a whole.

All that incalculable past of the Race is built into and represented in his body, and along with it a vast *psychic* life, a " cell memory," or " cell consciousness "—to use Haeckel's

own terms—and even an atomic consciousness, in every atom and cell of his body.

All this vast past claims the individual as its own, and repeats itself automatically—*unless governed by some higher directive power.*

Now man *does* possess this higher directive power; he rises above the mere animal just in proportion as he exercises it. He is higher than the animal not merely in what he can accomplish in the utilisation and control of natural forces, but also, and above all, in the control of his own lower or purely animal nature, and in the subordination of his individual interests to a higher or moral law.

It is evident, in the first place, that this power resides in the mind. Man rises above the animal in the first instance by reason of his superior mentality.

Superimposed, as it were, upon the lower or animal-psychic nature, man possesses a psychic something which we commonly call the *soul,* and which is principally associated with his mental activities. That *soul* not merely differentiates man from the animals, but also one individual from another in what we call his *character,* his individual powers and moral nature.

Now it is precisely in that *soul,* or higher psychic self, that we locate the great struggle which goes on in man between what we call good and evil, between the higher spiritual nature and the lower or animal-material. It is there that—at the present stage of evolution—we locate *ourselves.* From that point of view we are able both to look *down* upon our merely physical nature, and the past of evolution, and also to look up to a higher spiritual nature or perfection not yet realised, but none the less already entering into our consciousness, and influencing us, as it were, from *above.*

Now it is readily seen—on the basis of our primary postulate that the self in man is one with the Infinite Self—that this coming into activity or realisation in the individual self of a higher nature is the natural and legitimate result of evolution; evolution being essentially an expansion of consciousness, a self-realisation.

Evolution is an *unfolding.* Nothing can really *become* what it is not already. You may say that the acorn is not the oak tree, nevertheless it can only become the oak, and nothing else. Not merely must the cause be adequate to the

effect, but the effect is contained in the cause ; they are only varying aspects of one and the same thing. Man can only *become* divine because he is so already.

That small fraction of Man, however, which we at present know as our individual self, appears to occupy a midway position between two poles—spirit and matter. Between these two poles the whole vast Cosmos is spun out, One in Substance, yet infinite in variety ; and the conscious *self* appears to traverse this Cosmos in an evolutionary cycle, or possibly to pulsate—the eternal *Motion* of the " Great Breath "—between pole and pole.

We stand at present in a position in which we recognise an evolutionary past which we have already transcended, the possession of powers of body and mind exceeding those of other individuals or of the lower orders of evolution ; while, on the other hand, we are conscious of limitations yet to be transcended, of powers which others wield to which we have not yet attained ; nay, even of possible powers which may and shall be ours, but which the divinest man has been unable to declare or reveal to our present imperfect and limited human nature.

There must be powers in the Universe as little suspected by us as are those of electricity and magnetism by the primitive savage ; but if our fundamental principles are true, these powers are part of the Self, and they exist not merely in the external universe but are also *in us, now,* even in our body of flesh, and we must as inevitably come to know and wield them as a part of *ourselves* as we now do those powers which we already possess and consciously use in our present bodies.

All the powers that build and sustain the whole Universe are operative in our body *now,* though we possess and utilise them all-unconsciously. The same Root Substance is manifested on all possible Planes, and in all possible phenomena. It is immanent in all things, though, viewed from the individual standpoint, it also appears to be transcendent.

The One Life *moves* in all. We can no more have a principle of life, thought, or consciousness apart from the Universal, than we can have a body, on any Plane whatsoever, compounded of matter or substance which is *not* a form or mode of the universal Substance.

Thus the higher and the lower self are not two in reality, any more than are spirit and matter, or subject and object.

The animal-psychic through which we have passed, and through which other monads or units of consciousness are passing, is just as much a part of the life of the One Self as anything which we may place in a transcendental region, and, worshipping it from afar off, call it Divine.

How, then, does the lower nature appear as the adversary of the higher ; how are we conscious of such a struggle within ourselves for the supremacy of the one or the other ?

The answer is a very simple one, and requires no violent resort to a God and Devil theory. It is simply this, that our natural position at the present time is on the upward or return half of the great cosmic cycle. We have passed the lowest point of the outgoing process which led us into individualisation and apparent separation, and the law of our nature is now expansion and re-unification. Anything which opposes this, anything which holds us back and checks the natural process, will assume the appearance of *evil*, though in truth there is no such thing as evil *per se*. The outgoing, differentiating, or individualising half of the cycle, the struggle for individual existence and survival of the fittest, is just as much *good* in its proper order and place as part of the whole as is the reverse ingoing or unifying process. Where individualisation is the law of existence, unification must appear as evil ; where unification should take place, individualisation is its adversary.

We locate ourselves, therefore, somewhere or other on the return half of the great cosmic process of evolution, on that half in which the self gradually re-emerges from its limitations, negates the negation of *matter*, and reasserts its infinite and eternal nature. Even thus is man able at the present time to assert his immortality, though the common acceptation of this term is only half the truth, for it includes only a concept of an infinite future, and neglects the infinite past. The real Self can have neither past nor future, it eternally IS.

Behind us lies the whole vast past of evolution, actually built into our body and psychic nature ; before us is the whole vast future—also *within* us, but not yet disclosed to our consciousness. The past, as built into our bodies, strives to retain its hold over us ; and—since it is to us for the time being the apparently *real*—it largely succeeds. The external world, as we know it, is the inverse or reflection of our present powers of consciousness ; it is what we have realised of *ourselves* ;

and what we have not yet realised, the unseen universe, seems all vague and shadowy in comparison. We cling to the seeming real like limpets to a rock, and encase ourselves in an almost impenetrable crust of conventions, customs, habits, and ideas. We should, indeed, never get free of these were it not that we are moved on by an inexorable power over which we have no control, that great stream of evolution which forbids anything to stand still.

Moreover, in spite of every effort on our part, the so-called real is constantly slipping from our grasp. At a certain period of our evolution we come to realise that the effort to retain a hold on the things of time, and matter, and sense, brings with it weariness, pain, and suffering.

How, then, do we learn this? How does the *soul* or *self* learn it; how does it become an inner, innate, inborn conviction of the individual? Why does one individual know it, and not another? How does the individual Ego acquire an intuitive *spiritual* knowledge, the conviction that the body and mere animal nature is not himself, that it is something which must be conquered and ruled, that *in itself* it is antagonistic to his higher nature, and is continually dragging him back therefrom, and causing him to fall into sin and suffering, making of him a slave and creature of circumstances where he ought to rule and be free?

The obvious answer to these questions is, that the soul *evolves* as well as the body. The vast experiences of the past which enable the individual to discriminate between truth, goodness, and beauty, and their opposites—nay, further, which lays an imperative command upon him to *realise* the higher in his own person, and reject the lower as unworthy of his nature—must inhere in *something*: just as certainly as any lower psychic qualities which we may attribute to an 'atomic memory,' or a 'cell memory.'

Much controversy has raged round the doctrine of *innate ideas*. The notion that there could be any ideas whatsoever innate in the mind or soul was supposed by many to have been utterly destroyed by Locke in his celebrated *Essay on the Human Understanding*, published in 1690. Locke declared that the mind of every individual born into the world is a perfect blank, a *tabula rasa*, and that nothing was written thereon but what the individual experienced through his physical senses. But modern or materialistic psychology

itself gives a direct negative to Locke's contention. The generally accepted position now may be said to be that formulated by Herbert Spencer, who accepted Locke's general principle that the contents of the mind must be gained by experience, but rejected his dictum that the *individual* mind is a *tabula rasa*. According to Spencer, each mind has a character of its own, a number of *inherited* qualities which are the result of racial and ancestral experiences.

But if there is no reincarnating soul or Ego in which these experiences inhere, then they must inhere merely in certain physical cells, they must be handed on by some purely physical process from germ-cell to germ-cell. Here, however, comes in the great difficulty that so many scientists, with Weismann at their head, deny that acquired character can be thus transmitted.

All these controversies, however, can be set aside when once we have accepted the doctrine, or theory, or fact—whichever we may like to term it—of a reincarnating Ego. The difficulty which the ordinary religionist—who does not believe in the pre-existence of the soul—has to face, is quite as great as that of the materialist who believes in no soul at all. The one has to attribute individual character to the will of 'God'; the other has to plant this character on the already overburdened physical germ-cell.

On the basis of the existence of *matter*—on any Plane whatsoever—as simply a form or mode of the One Universal or Primordial Substance, it is difficult to see how or why science should strive to limit all psychic phenomena, even mind itself, to merely physical matter, to a structure or organism compounded of that form of motion of Primordial Substance which we know of as our chemical atoms and molecules. It is difficult to see how it can be maintained that *ideas* can only inhere in such a form of Substance, can only be handed from one individual to another because inherent in the *physical* germ-plasm. They may quite as conceivably and legitimately be postulated as inherent in an *etheric* form of Substance—not to speak of any higher Plane—in that form of motion of the Primordial Substance which constitutes etheric atoms and molecules, even though science has not as yet any definite knowledge of such structures. Such a proposition is both thinkable and logical, even without any definite scientific knowledge of the structure of *matter* on any Plane higher than

the physical. In truth, however, there is ample scientific evidence that intelligence, mind, consciousness, *do exist* in disembodied entities.

We say, then, that the vast experiences of the past inhere in the *soul*, in the conscious thinking principle, or Ego. This soul, or Ego, which we locate as a form or mode of Primordial Substance on the *mental* Plane, evolves through the experiences which it encounters on the lower or physical Plane during repeated incarnations. It may have—in all probability it has—an evolutionary cycle of its own on its own proper Plane; but by correspondence and analogy we should conclude that just as the One Self incarnates and reincarnates in the whole phenomenal universe—which process is a necessity of Its own nature—so also the soul, or individual self, or Ego, repeating or reflecting the universal process, incarnates and reincarnates in the lower phenomenal world; the process also being a *necessity* of its nature. "As above so below."

This soul, or reincarnating Ego, then, we would place on the mental Plane. It is the thinking, conscious *individual* 'I.' It is that which knows, experiences, remembers, suffers, and enjoys. It stores up within itself the fruit of all the innumerable experiences through which it passes in repeated incarnations; and perchance much else which it garners on other Planes. It endeavours to impress this acquired knowledge and experience upon the lower *personal* self, but in this it is only partially successful.

The lower personality is, in the first place, as we have already seen, merely physical, and subject largely to physical environment and heredity. The brain, as the receptive psychic organ, can receive impressions either from above or from below, or rather from within or from without. In our present social conditions and training of children, however, it is almost wholly the without which claims the attention of the nascent individual, the newly-born Ego.

Parents mostly believe that the soul of the child is a new and baby one; they tacitly accept Locke's theory that it is a *tabula rasa*, that it can hold nothing but what is now impressed upon it from *outside*; possibly with a vague idea, however, of some kind of heredity in its character. If, perchance, the child does exhibit abnormal psychic or other powers, reminiscences of past experiences of which the parents know nothing, or clear-seeing where the parents are blind:

this is usually regarded as decidedly uncanny, and the child is even punished for saying what, to the parents, is untrue.

Yet the true meaning of education is to *educe*, to *draw out* that which is already within ; and if parents—or the Church which professes to instruct the parents concerning *spiritual* things—really understood what the soul is in itself, what it contains of an immeasurable past, and what is its relation to the body, they would give the reincarnating Ego a much better chance of obtaining a body and environment in which it could more fully express itself.

We have, then, superimposed as it were upon the animal-psychic nature, this higher psychic entity or Ego which has reached a more or less advanced point in the scale of evolution, and which—if it is given the chance of doing so—will express itself as the *character* of the man in any one particular incarnation.

This higher psychic entity has *to make use of* the lower physical organism, and it can only do so by impressing or superimposing its vibrations upon the physical brain and organism.

Let us clearly understand that this higher psychic entity is *an actual force or form of energy*, just as capable of producing physical results as electricity or magnetism. Its physical action is seen in the various changes of structure which go on in the brain and nervous system as the *accompaniment* of thought. It is a definite organised form of substance on the mental Plane, and, as such, is simply a modification of motion of Primordial Substance. We may reduce its action simply to a matter of vibrations, since science is so fond of vibrational conceptions of force or energy. If the physical brain can respond to these higher vibrations it is receptive of the energy of thought, the *ideas* of the higher Ego.

The *action* of the self on the mental Plane is to *think*; and a thought is a *thing*, as definite on its own Plane as any physical object on our material Plane. But each individual thought or idea of the individual Ego is not merely a *thing*, it is a part of the mental *body* in which the self is encased on the mental Plane. Man, in fact, possesses a mental body, as well as a physical body and an etheric or ' astral ' double.

The result of the superimposing of the higher psychic nature upon the lower personality works out in many different

ways in various individuals, according as more or less of the higher or of the lower predominates.

In the purely animal and early human stages of evolution, we find the energy of the mind wholly subordinated to the needs and desires of the physical organism. As the individual gradually rises out of this stage, we find a more or less predominant individuality, or *character*, coming into evidence; we find something not merely added to the lower nature, but superimposed thereon as a power which must now govern and subordinate it. That something we now call the *soul* or *Ego*. It has a will of its own to accomplish and achieve; a will which sets aside and triumphs over physical obstacles, heredity, and environment.

Most of us at the present stage of our evolution are a strange mixture of the higher and the lower psychic nature. As we have evolved out of the lower psychic, and as it comes first in the order of evolution down here below, it is the predominant factor in the first stages of life in any one particular incarnation. Some individuals—in any one life—never get beyond it; others only do so late in life; a few very advanced individuals may come very early in physical incarnation to a realisation of the higher nature operative within them.

We may note here, as accounting for much which would be otherwise inexplicable in many of our experiences, that just as the physical man, in any one life, has to run rapidly through all the previous physical stages of evolution, so also must the reincarnating Ego pass through certain psychic stages representative of the past.

Into the Ego—or, let us say rather, into the mind body of the Ego—as well as into the physical body, is built an immense past of evolution. In it inheres all that the individual has become in character and faculty as the result of his past incarnations. It exists on the higher Plane as a subtle, ensouling, impelling *force*; largely desirous, as is the physical nature, of repeating former experiences, of realising on the lower Plane unsatisfied desires, ambitions, and emotions or sensations.

This inner impelling force or character leads the physical man into certain courses of thought and action, and its first influence on the personality in any one particular incarnation will be in the working out, completion, or exhaustion of some

unsatisfied tendencies, the repetition of previous acts in previous lives, the same in *motive* though different in form and circumstance. We may note much in ourselves and in others which has seemed in our earlier days to be so insistent, so dominant, that we could then have pledged our whole life to it; yet later on it falls from our will and desire: while possibly other influences and motives rise within us, motives which were previously unsuspected, or only dimly foreshadowed, but which now bring about surprising changes in our lives, sometimes even amounting to a complete change of personality, as if we had suddenly dropped a dress in which we were merely masquerading, though at the time we did not know it as such.

Thus we may run more or less rapidly through stages belonging to the past of our inner psychic nature, and which still inhere therein; stages which we have previously left incomplete, or which still hold us in the bondage of attachment and desire. In addition to this, we have to reap much which we have previously sown in our relations to others; to repay our *karmic* debts, both of good and evil.

We must note now, however, that this higher psychic nature or reincarnating Ego is not the *spiritual* man, the Higher Self.

The reincarnating Ego being largely the product of the experiences of the lower animal man, is itself, up to a certain point of evolution, wholly subservient to the lower order of nature. God Himself, as that which lives and moves in all, must be said in a certain sense to be subservient in the lower orders of 'nature.' Hence the question, why does God *allow* so-and-so? No single form of life can move or act in separation from the One Life; but the higher lends itself, as it were, to the lower, which uses it for its own selfish and individual ends, all unconscious of the divine nature of the powers it thus prostitutes. The higher thus becomes the 'sacrificial victim' of the lower—one of the mysteries of the 'divine incarnation.'

This principle of the subordination of the higher to the lower must act by correspondence and analogy in all relations as between one Plane and another. All energy of whatever kind on any lower Plane comes by influx from the next higher, and that again from the next, right up to the highest, which is the ONE including all others.

But the energy coming in from a higher—or more interior—Plane, is limited and conditioned by the *forms* already pertaining to the lower Plane; and so also the higher psychic man, coming down into a body of flesh, is limited and conditioned thereby. The reincarnating Ego may have gained much experience which—if it could be impressed upon the physical brain—would cause the personality to avoid many dangers, or even a wholly disastrous course of life.

On this same principle, then, we may postulate the relation which must exist between the higher spiritual self, existing permanently on the spiritual Plane, and the reincarnating Ego existing on the next lower or mental Plane. The mental body of thought-forms which constitutes the individuality on that Plane is, as we have already noted, largely the product of the experiences of the Ego on the lower physical Plane. The thought-*forms* are largely moulded from below, while the *energy* embodied in those forms must necessarily come from above, from the true Self, the source of all energy, motion, or life.

While, therefore, the Ego—the conscious thinking self now located in the *soul* or mental body—looks down upon the lower physical nature, and negates the claims of that nature to dominate its will and conduct: it also looks up to a higher spiritual something claiming its allegiance, though it may not yet have clearly recognised that higher something to be its own real Self.

What, then, shall we say of this Higher Self, of its own proper nature and functions?

Living ever in the supreme strength and knowledge of its divine nature, in the eternal light which radiates from the ONE: Man on that highest spiritual Plane of the Cosmos is a *Divine Son of Light.*

"Clothed with the Sun," no mortal eye could look upon the glory and majesty of that Immortal Divine Being: which yet, did the mortal but know and realise it, is *Himself.* Here and there, perchance, saint or seer may have caught a dim reflection and vision of this radiant *Augoeides*; and tradition has it that one of Nazareth was once partially transfigured, even in his body of flesh, so that his disciples saw him shining with the glory and radiance of his divinity.

In its own nature this divine Man, this Higher Self of all Egos, can never be other than what it eternally IS. It can

never ' come down ' into incarnation any more than the Sun comes down to Earth when its rays vivify and energise the lower world. The Sun exists in the majesty and might of its own nature, even while it radiates life and light to all the worlds.

Even so must it be with that Higher Self which is our own *alter Ego*. It is " the light which lighteth every man coming into the world." It is—did the Christian Church but know it—the Divine Son, the Christos, the " First-born of the Father," the Man " made in the image of God."

By, and in, this divine nature we literally live and move and have our being; yet, from the lower standpoint, it appears as something to which we must attain, something which we must become—nay, even something utterly transcendent, to which we can never reach.

Let us learn, however, that all *becoming* is only illusion, due to a false sense of separateness which arises when consciousness falls into modes of time and space.

Briefly summarised, we may here regard the constitution of man as follows :—

The Higher Self, as the source of *all* that can manifest on the lower phenomenal Planes as our individual or personal selves, radiates its light and life even as does our physical Sun. The *rays* which it thus radiates are *actual forms of energy*. They take form and substance on each Plane of the Cosmos. On the mental Plane they energise as thought-forms, which become our thought-body, soul, or reincarnating Ego. From that soul they are again radiated to the lower etheric Plane, where they build up the *etheric double* upon which the physical body is moulded.

But, in thus coming through the thought-body, the one divine energy will, so to speak, lend itself to already existing forms therein; forms which now, at our present stage of evolution, are largely representative of the *lower* experiences of the Ego in the world of physical matter. These thought-forms, then—energised from above, but largely moulded from below—will pass on the energy to the lower or etheric Plane, where they will—previous to any one particular incarnation—build up an etheric body or *double*, representative of the particular thought-form or forms which the Ego now desires to express or work out on the physical Plane of experiences. This etheric double is in its turn the vivifying and moulding

principle of the physical body, interpenetrating and energising every organ and cell thereof.

This classification or representation of the connection of the lower personality with the Higher Self will be found to be of the utmost utility in its practical application to every effort and aspiration of our lives. It will be found to be broadly representative of much which can be learnt in greater detail in many systems of esoteric or occult teaching; and even in exoteric religion it corresponds to the ordinary classification of Man as consisting of body, soul, and spirit: while at the same time linking and harmonising this classification with scientific concepts of matter (or substance) and energy (or motion).

Some few practical considerations may fitly conclude our present subject.

CHAPTER XVIII

THE IDEAL REALISM

"The essence of our being, the mystery in us that calls itself 'I,'—ah, what words have we for such things?—is a breath of Heaven; the Highest Being reveals himself in Man. This body, these faculties, this life of ours, is it not all as a vesture for that Unnamed? 'There is but one Temple in the Universe,' says the devout Novalis, 'and that is the body of man. Nothing is holier than that high form. . . . We touch heaven when we lay our hand on a human body!' This sounds much like a mere flourish of rhetoric; but it is not so. If well meditated, it will turn out to be a scientific fact; the expression, in such words as can be had, of the actual truth of the thing."—THOMAS CARLYLE.

CHAPTER XVIII

THE IDEAL REALISM

THE soul of man is the battle-ground between all the *pairs of opposites*, the two contrasted poles of the ONE; between that which we now term the higher and the lower; between good and evil, spirit and matter, God and Devil; between the Self as infinite, free, unconditioned, and the same Self as individual, limited, and necessitous.

Possibly it is this very contrast which constitutes self-consciousness or I-ness. Possibly it is only thus that the One Self can know Itself as a *Self*. Certainly it is only thus that we know ourselves, and any larger measure of self-consciousness to which we may possibly attain can only be conceived of as a matter of extended relation and proportion, until at last we may possibly know ourselves as the Whole.

Meanwhile, the lower apparently tries to appropriate the powers of the higher for its own individual selfish ends, knowing not as yet that the higher is its own *alter Ego*.

The Higher Self, knowing its own transcendent nature, and that the lower is the creation of its own divine will; knowing that that will and purpose in the lower must inevitably be accomplished or realised; sits, as it were, an impersonal spectator of the Cosmic Process; while yet it *acts* in every part and at every moment of that process.

"I establish (or pervade) this whole universe with a single portion of myself, and remain separate," says Krishna, the Supreme Spirit, in *Bhagavad-Gita*; and again, "There is nothing in the three regions of the universe which it is necessary for me to perform, nor anything possible to obtain which I have not obtained; and yet I am constantly in action."

Now it is obvious that the real well-being of all the lower 'creation' must consist in action which is harmonious with

the divine will and purpose working in all—if only that will and purpose could be clearly known.

When we say *the divine will and purpose,* however, we do not mean any supposititious commandments given by a personal God to man, but simply and solely the *natural law* of our being—on all Planes of the Universe.

In the lower orders of nature, in the animal kingdom, this natural law is followed and realised automatically. We do not grant to the animals any abstract sense of right and wrong ; though in some of the higher animals, coming under the direct influence of man, there is something very nearly akin to what we call *conscience,* the inner prompting of a moral nature.

But in man there is the consciousness of a *choice* between a higher and a lower, between a right and a wrong. It is the sign and manifestation of a higher divine nature towards which he is gradually evolving ; it is the partial realisation of an absolute freedom to do *right,* a freedom which can be only realised in that perfect knowledge which makes wrong-doing impossible.

In man at the present time exists a choice and a desire, sometimes for the higher, sometimes for the lower : simply because the individual has as yet only partially realised the divine nature within him ; as yet only partially knows his real nature and transcendental powers. When these are fully known, all questions of right and wrong will have vanished—vanished in that higher aspect or polarity of *Being* which we sometimes call ' Spirit,' even as they vanish, though necessarily for the opposite reason, at the lower pole, in what we call Matter, and the so-called lower orders of creation.

Let us see for a moment, and apart from all mere codes, religious or otherwise, how this higher divine law or *nature* should express itself in man.

We may sum up its action and expression in three words : the True, the Good, and the Beautiful.[1]

To man at a certain stage of his evolution there comes a perception of these, not merely as being the opposite of falsehood, evil, and distortion, not merely as being something

[1] We must not, however, understand the term *good* in any mere conventional sense. It means rather wholeness or wholesomeness, fitness, quality, harmony, etc.

desirable, but even as an imperative law of his nature which he must disobey at his peril.

At the present time we might possibly say that a large majority of the human race have not yet apprehended that truth, goodness, and beauty *are* the law of their nature; that they should strive to realise them individually and communally. Even with those who have realised that these ought to be their aim and ideal, the lower nature still strives for mastery, and too often succeeds in gaining it.

We say then, in such case, that the man *sins* against his higher nature. "Sin is the transgression of the law"—the law of our own nature at whatever may be our position in the scale of evolution. Where the law is not known, sin does not exist; and an action may be quite right for one man, but wrong for another who has reached a higher perception of the divine within him.

Let no man judge his fellow; the law of the man's own nature will inevitably judge. Heredity and environment may possibly be too strong for the individual who would otherwise be what the world calls moral and good; and herein lies the responsibility of the parent and the community to see to it that heredity and environment are all on the side of truth, goodness, and beauty.

But the lower nature too often holds us in bondage, even when we have perceived the beauty of what we might be, were our higher spiritual nature wholly to rule within us. Again and yet again we fall under its sway; nay, it would even sometimes appear that the more we strive for the higher, the greater becomes the strength of the lower. Perhaps we succumb altogether, and give up the struggle for this particular life, resigning ourselves to what we are pleased to call circumstances. But assuredly the conflict must be renewed in some future incarnation, even if not on the higher Plane; for evolution is the law of our being, and evolution forbids anything to stand still. Our only safety lies in refusing to accept defeat. Every effort made to conquer, even though ineffectual at the time, is a power we shall wield in the future conflict. The only real failure is to give up trying.

Truth, goodness, and beauty as known to us are matters of relation and proportion, but in the Divine as such they must exist as absolute perfection, and our evolution will thus tend more and more towards their perfect realisation; they are, in

fact, the *Ideal Reality*. They come to us from the above, from the divine, not from the below, not from that lower nature which we have left, or are striving to leave behind. In the lower animal nature, indeed, they are wholly unknown.

Truth perfectly known must be perfect goodness and perfect beauty.

Goodness perfectly realised must be perfectly true and beautiful.

Beauty perfectly manifested must be perfect truth and goodness.

In the Divine as such all this must exist in the fulness of consciousness that such IS the Self; and the Higher Self in man, living ever in the glorious light of a perfect knowledge of the *divine* relation and proportion of *all*, radiates down into the lower self, into the *soul* of man, whatever that soul is capable of receiving of this perfect divine knowledge. In its turn the soul endeavours to impress this upon the lower physical personality, and whatever can thus come through to our lower world finds expression in manifold forms of science, philosophy, religion, conduct, and art—but, alas! how blurred and distorted, how little representative of the *reality* which the soul intuitively senses, and now calls the *ideal*.

How, then, are we to bring these *ideal realities* through to the physical Plane; what is the *practical* method by which we —the present personality—may realise our true divine nature and powers; by which we may realise in our own person perfect truth, perfect goodness, and perfect beauty?

Exoteric and authoritative forms of religion here address us with their demands for implicit belief in their own specific doctrines and sacraments. To many, indeed, perhaps to a great majority, exoteric forms of religion constitute the only possible way. The child who has not yet learnt to rely upon its own physical powers rightly demands the help of the father or mother—let us say, in order to cross the road. But the adult in full possession of his powers does not dream of appealing for help to do so. Self-reliance, indeed, is what we strenuously endeavour to inculcate in our children; yet, strange to say, it is commonly accepted that there is a different law and a different order of things in the so-called spiritual world: as if man could never become a spiritual adult. It has always been the interests of the Church to foster this fallacy; to frighten the spiritual babe with the bogey of supernaturalism;

to teach men that they are crawling worms, instead of divine beings.

Let a man *think* that he is a spiritual babe, or a crawling worm, and such he will assuredly be. Let him *think* that he has no higher powers wherewith to command his lower nature, and assuredly he will do nothing but grope in the dark for a protecting hand, and possibly end, as many have done, in cursing God for their own failures.

And here we put our finger upon the first and fundamental law of *creation*. What a man thinks, that he becomes—in this or in some future incarnation.

The first great fact which we must realise in the *practice* of religion—in the effort to *become* that which we have now intellectually apprehended as our higher divine nature or self—is the fact that the mind is the great *creative*, or rather *formative*, power; that what is found in the mind presently becomes materialised as the objective conditions of life and consciousness.

The statement is often made that the universe is the objectivised or materialised thought of God; and we have ourselves postulated that the action of the Self on the mental Plane is the immediate production in consciousness of the external image of the thing thought of. Thus we may find in the operation of the individual mind the reflection of the universal process. As above, so below. "The Son can do nothing of himself, but what he seeth the Father doing: for what things soever he doeth, these the Son also doeth in like manner" (John iv. 19).

We might thus almost say that the primary activity of the One Self is what we call thought, or possibly *ideation*. Being and thinking are inseparable. To be is to think, to think is to be. It is simply impossible for us to conceive of the one without the other.

If this be so, we cannot regard thought or ideation as a phenomenal activity or aspect of the One, though we may regard *thought-forms* as such; and, in fact, our working hypothesis is precisely this: that the eternal *motion* of Primordial Substance is on the one side, ideation, thought, consciousness, all that is *subjective* in the Self; and on the other side, form, matter, phenomenon, all that is *objective*.

If we regard Primordial Substance as being actually the One Self, as being that which sub-stands subject as well as

object: we see that this One Self, by its primary activity of thinking, produces *within Itself* the *form* of the thing thought of. Thus all things are truly within the Self; though, viewed as object merely, viewed as *things*, they are separated therefrom by the inevitable duality of subject and object.

The individual Self, then—the 'Son'—possessing or reflecting the nature of the One Self—or 'Father'—not merely *thinks*, but by Its thoughts creates the objective form corresponding thereto; and the first step towards a practical realisation of our true divine nature and powers is to learn to consciously exercise this power; to obtain control of our thoughts; to *use* our mind as definitely and consistently as we use our physical body; to create only such thought-forms as we desire.

Every one knows in a rough and general way that if they would accomplish anything they must first *think* about it, and in many cases they must think hard and think continuously in order to achieve success. But few people realise the true creative power of the mind, few people realise that in thus concentrating their thoughts on one particular object they are not merely creating a mental picture of the thing they desire to accomplish, but are actually bringing into operation an active power, a form of substance on the mental Plane; they are actually bringing into play, through certain definite channels, a force as real and natural as that of electricity and magnetism, though far more subtle and potent.

By the power of thought we create or build a definite *mind body*, and if the will or desire behind those thought-forms in which the self is encased on the mental Plane is centrifugal in its nature, if, that is to say, it is directed downwards or outwards to the lower Planes—being wholly connected, let us say, with physical-material matters—then it must inevitably sooner or later materialise on the physical Plane. Even so is real sincere prayer 'answered.'

We have already noted that in the natural order of evolution considered from the individual standpoint, the higher is, in the first instance, subject to the lower; but subsequently establishes a rule and supremacy thereover. Mind is higher than matter, but in individual forms of matter, as we know it on the lowest or physical Plane, mind has wholly disappeared. With the progress of organic evolution mind gradually reappears; and in the human kingdom establishes a

supremacy over many material conditions to which it was previously subject. A man—when he is not wholly an animal—governs his physical body more or less successfully, though mostly unconsciously, by means of his mind; and this he may do without any considerations of a higher spiritual nature. Just as the physical comes before the mental in the natural order of evolution, so also the mental comes before the spiritual, and a man may even be an intellectual giant, but with scarcely an atom of spirituality.

Let us consider in the first place, then, this power of mind over body apart from any spiritual or religious motives. Although it is true that, apart from the One Life, the individual could have no existence or powers whatsoever, either on the mental or the physical Plane: yet, in the natural order of evolution, the mind *body*, like the physical body, is determined as to the forms which exist therein by the experiences through which the individual passes during repeated incarnations. The thought-forms of the individual are moulded, in the first instance, from *below*, from the physical and animal kingdom though which the individual is evolving. The particular *form* is determined from below, the *energy* comes from above.

It is one of the most significant signs of the times that the supremacy of mind over body is now beginning to be understood and practised in the cure of disease; that the real potency of the mind as a creative and regenerative power is beginning to be realised, even though the theories and practices resulting from this are in some cases wildly extravagant. We have prominently before us in this respect the modern practice of hypnotism, suggestion, auto-suggestion, and various systems of mental cure; while last, but not least, we have so-called Christian Science. In this latter system such a large amount of a special religious element is intermixed, that it can hardly be classified with other systems in which the religious or spiritual factor is wholly absent, that is to say, with mental cure, pure and simple. Nevertheless, we would emphasise here that the actual *modus operandi* of the *natural* forces which are brought into play must in all cases be the same, whatever may be the theories or ideas by which that *modus operandi*, and the results undoubtedly obtained, are sought to be explained. Physical results *are* produced by mental processes; disease *is* cured by the operation of mind. An

apple *does* fall to the earth, and it matters not whether you call the actual force which produces this phenomenon 'gravity' or 'mortal mind': it is *something* which we can utilise to produce definite results.

Christian Science denies the reality of matter *absolutely*, not relatively. The physical body, and every quality of physical matter is an absolute illusion. They have no existence whatever save in "mortal mind," which is itself an absolute illusion—or, as Mrs. Eddy defines it, "Nothing claiming to be something." If this be the case, however, it is clear that all bodily states must be the product of mortal mind: *i.e.*, a state of health as much as a state of disease; and, therefore, the mere change from disease to health is the result of the action of "mortal mind," and not of any higher power. An absolute illusion cannot create a reality. Arguing from Christian Science premises, health is just as much an illusion as is disease, and the whole of Christian Science healing is the operation of "mortal mind." In any case, the Christian Science healer must and does use mental effort and concentration—sometimes called 'prayer'—just as in other systems of mind cure.

The realisation of the power of the mind to determine and modify our bodily states is perhaps the first step towards the definite development of higher mental powers to which we shall presently refer.

It is well known that the mental states of joy or grief, of courage or fear, of optimism or pessimism, will largely affect the general health and constitution; or that some sudden shock to the mind will result in disastrous or even fatal effects. In hypnotism and suggestion we have a potent means of producing results by a direct appeal to the mind of the individual. The firm conviction, suggested or otherwise, that an anæsthetic or a poison has been administered will produce anæsthetic or poisonous results in the system, even eventuating in death.

The ordinary individual commonly allows the action between mind and body, in the support of the latter, to take place unconsciously and automatically; and is able to do so because the functional activity of most of the organs has now sunk below the threshold of our normal consciousness, and is relegated to that region of the self which is now commonly termed *subliminal*. This being so, we have come to regard

these functional actions as something over which the self has no control; and, therefore, when any derangement or disease arises we resort to external remedies and drugs, instead of using our own creative and regenerative powers. We allow our bodies to be our masters in disease and pain, as well as in desire and appetite.

There are many experiments in hypnotism which show us that it is really a part of the *self* which regulates and carries on all the organic functions of the body, and that the part of the self which does this can be largely got at and influenced through the power of the mind and will. Besides this, we have examples of Hindu *Yogis* who can exercise complete control over organs which are commonly supposed to be wholly automatic in their action, and entirely beyond the reach of conscious control. Many of these Yogis can stop the action of the heart at will; they can reverse the peristaltic action of the intestines; they can even suspend animation altogether for many months. These practices are known as *Hatha Yoga*, and though they are not generally of a desirable nature, and require years of arduous training to accomplish, they at least serve to show what can be done by a concentration of the mind and will on the organs of the body which we are accustomed to regard as altogether beyond our control.

Although, therefore, such extreme practices as these are by no means to be recommended, especially for the Western mind and temperament, it is yet of the utmost importance that each individual should fully realise the enormous power which the mind does actually exercise within the body, both in health and in disease; that they should realise that thought is an actual form of energy producing physical results; and that they should learn to take conscious control of this power for the preservation of health and the cure of disease.

When the mind and will are firmly and continuously directed to this end, the body may be wholly re-created and re-generated, even with little or no knowledge of the higher and diviner powers of the self. Let it be clearly understood that there is no magic or miracle in this process, except in so far as all natural processes may be said to be magical. Sandow has taught us that, even in the development of muscle, mere automatic exercise is not sufficient, the *mind* must also be put into the exercise.

The higher powers of the Self are no mere *subjective* things

which we may vaguely term *spiritual*, and relegate to a supernatural region. To accomplish objective results they must have a definite relation to the phenomenal world of matter and energy; they must be "structural facts" of the Universe. By the power of the Self the Universe is brought forth and sustained, and in the phenomenal world that One Power, or Energy, or Life, is seen and known in an infinite variety of modes and manifestations, constituting what we commonly call *Nature*.

Now in Nature there is no such thing as a miracle; definite results must have definite causes, and this would be true on all Planes, and not on the physical merely.

If, therefore, we require the higher powers of the Self to manifest in or through us—the physical body—we must make the lower nature receptive, sensitive, or responsive to the higher vibrations. We must *attune* the lower to the higher.

All the powers, all the vibrations in the Universe, are present with us now, here, at every moment of time, and at every point in space. They sweep through the room in which we sit; ay, even the divinest beauties of vision or hearing which the highest heaven can contain are with us now, and surround us, and interpenetrate us, could we but attune the physical organism to see and to hear, or rise in our normal consciousness to the Plane on which these are *Realities*. Our Higher Self does see, and does hear—otherwise *we* could never see and hear even what little we do, either now or at any future time.

To see, to hear, and to know the unveiled truth, goodness, and beauty of the Universe—even this, and nothing less, is the Ideal Realism we may and should strive to attain.

But, working as we do now from below upwards; associating as we do now our mind and consciousness almost wholly with physical matter and phenomena: we need to accomplish a re-creation and re-generation of the lower physical and psychic nature before we can even commence to attain to such a result.

This re-creation and re-generation which we should aim at accomplishing in our mind and body is something far higher and greater than the mere attainment of physical health and immunity from disease. The latter is a very necessary and preliminary step; indeed, it is unwise and even dangerous to endeavour to develop any higher powers in an unsound body; and particularly so if the bodily desires are not under complete control.

A very great deal has been written on this subject within recent years, and there are many more or less excellent books which give practical advice and directions concerning mental training and its relation to bodily and physical results. There are also many excellent teachers who make a speciality of this science. We cannot enter here into practical instructions or directions, our object being mainly to give the reader a clear conception of the scientific basis of the matter, and an apprehension of the *reality* of the higher powers which he can exercise if he will. We may note, however, that each and all of these systems ought to have a *common-sense* basis. If they have not, they should be avoided.

We need then, in the first place, to take conscious control of our mind and thinking for the purpose of accomplishing clear and definite results in the lower physical organism : realising as we now should that that organism in itself is merely an instrument, an automaton, a vehicle for the use and manifestation of the conscious thinking self.

But the mind itself, as well as the body, requires to be re-created and re-generated, in so far as it is at present principally formed or moulded from *below*. It stands, as we have seen, midway between the lower and the higher nature, and in the evolutionary process is moulded in the first instance by the lower experiences and vibrations. Such at least *appears* to be the case in all that we know of the mind in connection with our present limited consciousness and physical organism.

We must postulate, however, that the mind on its own Plane must really in the first instance be formed from above ; just as any Plane as a whole must be formed out of or within a higher one, and the higher Plane itself must be formed before the lower can come into existence. Before the return or evolutionary process can take place there must be the outgoing formative process. By correspondence and analogy, therefore, we should be inclined to postulate that the mind body which the Self forms for itself, has its own evolution to accomplish on its own Plane, more or less independently of the lower physical organism. The mind on its own Plane must, in fact, be almost infinitely more universal or cosmic than the narrow thing which is all that we can realise of our mind in connection with the physical body, and which is a matter of *memory* rather than anything else ; that memory itself being due, for the most part, to physical brain impressions. Added to the cosmic

aspect of the mind there must be, in the mind as a whole, all the accumulated experiences of an incalculable past of physical evolution; and how little of *that* we are able to bring through to our present consciousness. If Weismann or Haeckel can postulate a *soul* in a speck of protoplasm, which *soul* is really representative of all the past physical evolution of protoplasm—so that protoplasm as we have it to-day must be immeasurably greater than primitive protoplasm—what, indeed, must be the contents of the individual soul of man?

There is a vast amount of evidence to show that the mind really remembers *everything*; nothing is really forgotten; even impressions unconsciously received, the lightest vibrations conveyed to the mind by the senses, are all registered, and may and do reappear, perhaps when least expected. One of the higher powers which the conscious self is capable of exercising is just precisely this recovery of the complete memory of the long-forgotten past. No single detail of the great historic drama of man's evolution is missing in the indelible record of the higher mind.

That which now comes down, however, from the higher mind to the normal consciousness is not expressed as memory, but as faculty and character; whilst the individual from birth to maturity is continually creating thought-forms to correspond to the sense impressions of the physical body, until it would appear that the individual portion of the mind—the incarnating *ray* which is all that we at present know as *ourselves*—becomes encased in these forms as in a shell: thereby shutting out the higher powers of the real mind, and the still higher vibrations which come from the spiritual Self.

> "Shades of the prison-house begin to close
> Upon the growing boy;
> . . . . . .
> At length the man perceives it die away,
> And fade into the light of common day."

But the "vision splendid" may be regained: in a fulness and measure, indeed, which childhood and youth cannot compass. To do this, however, the mind—that portion which we at present call *our* mind—must be re-created and regenerated. Even as the atoms and cells of the physical body must be changed and renewed if health is to give place to disease, so must the mental images and mind forms in which

we have encased ourselves be reconstructed, in order that they may no longer form a barrier to the influx of the higher mental and spiritual vibrations.

It is necessary, in the first place, to *turn our attention* constantly and continuously to the higher *ideal* which we wish to realise; to the highest ideal we can form of truth, goodness, and beauty. In proportion as we can do this we shall find truth, goodness, and beauty becoming *realised* in our nature. The practical outcome of an intelligent realisation of the existence of our higher divine Self, is the opening up, as it were, of a channel of communication through which the higher can flow into, and manifest in, the lower. There is an actual structural alteration in the physical body and nerve centres. Every thought conditions a definite physiological change. We shut out the higher possibilities by thought alone, by thinking ourselves separate. Just in proportion as we think of ourselves as divine, in proportion as we realise that the divine is *within* us, shall we come to a conscious realisation of our divine nature and powers. Nor is there any other path by which this may be accomplished.

But in order to do this we require something more than a mere abstract idea; the value of a concrete example cannot be overlooked. Many would find it impossible to accomplish anything without some such concrete example which they might endeavour to copy or imitate. Hence the power of the *personal* Christ, the historical Jesus of Nazareth.

In all ages men have set up some such worship of the visible personal ideal; some form of divine man, virgin, saint, or hero: until these have even lost their value as actual evidence of what man himself can and must be; have been placed on a superhuman or supernatural pedestal, and, worshipped from afar off, have even been supposed to mediate between God and the soul, and to hold in their hand the keys of heaven and of hell.

At different stages of evolution many such phases may be passed through; and in any one incarnation even, a man may run more or less rapidly through some of these phases, recapitulating thereby some of the earlier experiences of his evolution, before he reaches the point where he can go forward to new experiences and increased knowledge and power.

To a large extent, therefore, the process of mental regeneration must consist in the breaking-up of fixed ideas;

or perhaps we might better say, the *spiritualisation* of all existing ideas and mental forms, as well as of the lower animal nature. Let us take a concrete example of what is meant by this.

At a certain stage of evolution, before the higher has obtained control of the lower nature, this latter appears as the deadly foe of the higher. The world, the flesh, and the devil stand in antagonism to God and the soul; and before it is clearly perceived that the Universe being ONE, the lower must exist as the will and purpose of the higher: the former will appear to be something which must be not merely subjugated, but even renounced and destroyed. Hence arise strange forms and practices of mortification, penance, and asceticism.

But beyond that, and in the light of a truer comprehension of the relation of the higher to the lower self, the latter is neither mortified, neglected, nor ignored, but simply *used* by the higher self, which requires a fitting body or vehicle in order to carry out, on the physical Plane, the purpose for which it has come down into incarnation. Just in proportion, indeed, as we see to it that our physical body is perfect, we are realising the ideal of truth, goodness, and beauty which we have set before us, and are also helping forward the evolution of the race as a whole; thereby becoming co-workers with the higher purpose which is manifesting itself in and through that process. The body is a "temple of the living God," and as such it cannot be vile, unless we dishonour and desecrate it ourselves.

But while we thus see to it that the physical body is made as perfect an instrument as possible, and while we work to the best of our ability in and through that body: there is, from the higher standpoint which we have now taken up, no *attachment* to the things done in the body.

This position of non-attachment is not reached, however, by any intensification of the idea of *separateness*, but precisely for the very opposite reason; because the One Self is seen as working in *All*. The position to be aimed at now, to be realised as we come to know more and more of the true Self within us, is, in fact, precisely that which we can and must even now attribute to the Consciousness, Life, Activity, or Will of a Supreme Being—"I establish this whole universe with a single portion of myself, and remain separate."

The position to be reached is that of the Self which knows Itself as transcendent as well as immanent. Observe that in its fullest conceivable development this is only an extension of the attitude which we *must* take up even now, if we are to be anything more than animals or automata. If we are to govern our lower nature at all we must take up a position or mental attitude in which we can say, ' I am more than the body, more than that in and through which I act, more than the animal.' Any mental position from which we *act* as something higher than that upon or with which we act, is a more or less transcendental position.

When, therefore, we have clearly realised that the mind or soul is more than the body, we commence to act from that transcendental position ; but if we act with *attachment* to the act, with desire for a further fruit of the action in a narrow, selfish sense—in other words, if we identify ourselves with the act—we abandon our transcendental position, and become, as it were, the act itself ; we attach the idea of selfness to a particular phenomenal form, and must enjoy or suffer therein accordingly. Nay, ultimately we must *suffer*, even if at first we enjoy ; for all illusion and separateness is in the end evil, pain, suffering.

What we really do if we attach ourselves to a particular action on the lower Plane, by desire for individual gain or enjoyment therein, is to make an *ideal* of something *below* us, something in the illusive world of phenomena on a Plane lower than that of the real Self. And since this power of idealising is a *creative* power, our ideal must inevitably become objectivised or materialised, must take form and shape on the Lower Plane, ay, even in our very flesh and blood, so that we are clothed not merely with the thought-form on the mental Plane, but also with a material body which may possibly be to us a prison-house of darkness and illusion, if not a veritable hell. Do we not see, indeed, that such it is to thousands of our fellow-creatures.

If, then, we desire anything for the individual self—wealth, pleasure, sensation, fame—most assuredly even these we shall realise and obtain, now, or in some future incarnation ; but they will be to us as prison walls and fetters, from which in pain and suffering we shall presently strive to free ourselves, and perchance hardly escape therefrom even when we have paid the uttermost farthing.

But the Self, knowing Itself as transcendental, and not attached to the fruit of action—the desire for selfish enjoyment therein—may possess the Universe, may perform all actions, yet be in no wise touched or bound thereby. All action is done because it is right and proper to do, because *others* are helped thereby, because it is the *Divine Law*, with which we have now identified ourselves.

"All things are lawful for me; but all things are not expedient," says Paul the Initiate, speaking from this point of view; and he continues, "all things are lawful for me, *but I will not be brought under the power of any.*"

To re-create and re-generate the mind, therefore, it is necessary that the *ideal* should be one which lies *above* the mind, soul, or reincarnating Ego; that it should lie in the transcendental regions of Being, in that which is immutable and eternal, not in the transitory and phenomenal. This statement, of course, is one which is made in some form or other in all religions; but we are here endeavouring to place it, not on any special religious basis, but simply as a matter of common sense based upon a scientific understanding of the nature and constitution of man.

We have seen that the individual or Ego, realising that mind is higher than body, that he himself is, in fact, acting in and by the mind, may establish thereby an absolute control over the body by directing and shaping his mental energies to that end, even without any reference to higher spiritual powers. We have also seen that the ordinary individual thus locating his *selfness* in the mind-body, or soul, may conceive of himself as occupying an intermediate position between the higher spiritual and the lower material, a position in which he can *turn his attention* either to the one or the other.

But a little further consideration must show us that just as the individual can thus operate upon the lower by means of the higher, upon the physical body by means of the mind: so also, if the mind be in its turn operated upon or used by the *self*, that *self* must exist on a still higher Plane than the mind.

Let us consider for a moment what we can do when we take our physical bodies to the top of a high mountain. Below us is spread a vast panorama, and we can select any one point of interest in the landscape, and keep our physical eye upon that point as long as we desire. We do not for one

moment suppose that it is the physical eye itself which *wills* to do this, we refer the act to a *self* behind the physical eye; and we find that that self not merely uses the physical eye as an instrument, but that the mind is also concentrated upon that special feature of the landscape which *we* have selected. The mind is used as well as the body.

Now let us come down from our mountain, sit in our easy-chair, and close our eyes. We may then call up before us at will the *mental image* of the landscape we have previously been viewing, and we may fix our *attention* on any particular feature of that landscape; and—if we have a tolerable amount of mental control or power of concentration—we may keep our mental eye upon that one particular feature for any desired length of time.

But what is the *we* which can do this, which apparently regards the mental image from outside, as a spectator, in precisely the same way as it previously regarded the physical object, willing and directing the mind as well as the body to the desired action? The physical landscape, we say—in conventional language—is not *within* us. Is, then, the mental image any more—or any less—within us? A clairvoyant or psychic individual may actually re-objectivise the mental image, and reproduce, in a crystal, for example, a visible picture of the landscape.

What, then, is the *self* which can call up a mental image at will; which has, as it were, the whole contents of the mind—the whole remembered contents—before it as a landscape, and can turn its attention to any portion thereof at will, selecting and associating any particular features which it may require for its immediate purpose? What is that self which *uses* the mind in precisely the same sense that it uses the physical body; and which, thus *using* the mind, must obviously be superior to it?

The self thinks: but the self is not the thought-form. The self acts: but the self is not the material act. The self acts in and through forms of Primordial Substance: but the self is neither the one form nor the other; it creates and destroys at will, moving through all forms, yet superior to all; immanent in all, yet also eternally transcendent.

The inalienable power or attribute of the Self is thought. But thought is not mind. By mind we understand something which evolves, a form, a phenomenon. But above this limited

and phenomenal something which we now call mind there lies a Power which creates and uses the mind, just as above or behind the phenomenal physical body lies a Power which creates that body. Both mind-body and physical-body are forms of Primordial Substance : but the Selfness, the Be-ness, the Life, the Consciousness which IS that Substance—which would still exist were all *forms* whatsoever, all phenomena, to vanish utterly, redissolved in the One self-existent, imperishable *Reality*—is transcendent, superior, unattached, unborn, free, and unfettered by any form.

Above all forms whatsoever, on any highest conceivable Plane, lies the region of abstract thought, the region of abstract ideas of truth, goodness, and beauty : ready to take form and shape in infinite variety in the universal or cosmic Mind, constituting what we then call the mental Plane, and from the *substance* of which, Man, or the individual self, must obtain his mind body as surely as he must obtain his physical body from the substance of the physical Plane.

To realise the true Self as transcendental—even to all mind-forms—must, then, be our Ideal, our aim, object, and goal. Even to realise *now* this transcendental nature of the Self, merely as an intellectual concept or working hypothesis, must give us an enormous power of control over both mind and body ; for it is the illusive identification of the self with something *less* than itself, with phenomenal forms giving a sense of separateness, which is the root of all illusion, pain, suffering, and death.

Our goal is nothing short of the Ideal Real ; that Reality of consciousness in which all things are known *as they are*, and not as they *seem* ; that Reality in which we grasp a *substance*, not a shadow ; in which we have laid hold of *eternal life* : a life not subject to the ebb and flow of phenomena, but full, free, immeasurable, triumphant.

The real and the ideal are usually considered to be as far apart as the poles ; they are, in fact, but other names for the dual aspect of the universe which appears as subject and object, or spirit and matter.

But though, in this relation, the ideal appears as something which is *not* the real : it must actually exist as *something* ; for all that becomes real, all that is ever practically accomplished, must of necessity first exist as the ideal.

Is it, then, only real when it is materialised in objective

form ? Is it not rather the case, not merely that the objective form is only real in proportion as it is touched with the magic power of the ideal, but that the true Real *is* that Ideal which can express itself in an infinite variety of forms, can find Its infinite life and bliss in so expressing Itself, yet be in nowise bound, limited, or conditioned by the forms It creates, nor touched or destroyed by the hand of time ? Which is the true Reality, the *idea* which the artist embodies in the picture or the statue ; or the material picture or statue itself which may be destroyed to-morrow ?

Which is the true Reality, that One Be-ness which lives and moves in All, creating in endless time and unbounded space out of the Infinite Pleroma which is ITSELF all this vast Universe of phenomena which comes and goes ; or that present but evanescent objectivity which we call physical matter and form ?

Which is the Reality, the Consciousness or Self which knows and acts ; or those *forms* of mind or body in which It expresses to Itself Its Own Infinite Selfness ? Even as the artist is greater than the picture or statue, the musician than the materialised score or the intruments by which it is rendered, the artisan than the material in which he works : so also the Self is greater than the whole objectivised Universe in and through which It expresses Itself. The objective Universe is the supreme work of art of the transcendental Craftsman, the Supreme Self ; a work ever perfect in truth, goodness, and beauty, yet never complete ; for we conceive that Self cannot do otherwise than thus *eternally* express Itself to Itself.

And here below, the individual self, repeating or reflecting the divine creative process, materialising in some physical form what dim reflection of the divine and eternal perfection of truth, goodness, and beauty it can mirror in its individual mind, and reproduce in the dulness and inertness of physical matter and brain, as science, philosophy, religion, art, and conduct : finds therein a joy, a happiness, a bliss otherwise unobtainable ; which, however, can be at its best but a faint reflection of the divine ecstasy of Life Itself—full-free, unconditioned, Eternal.

Briefly summarised, the three stages of evolution may be said to be : the animal, the human, and the divine. Each of these, however, shades off by imperceptible degrees into the

other, for they are all part of the *one* process. By evolution we here mean the *return* half of the cosmic cycle. There must have been a corresponding descent or involution in the first instance; but of this science knows nothing. In the first stage of the evolutionary process, however, as we know it, the individual self is identified with the physical form or body. In the second, it is identified with the mind body. In the third it is identified with the One Self, and is above all bodies and all forms, though active in all. When this stage is reached, when to the power of the mind over body is added the power of the Higher Self over mind, all things become possible, because all *causes* are known and realised as lying within the Self.

It is on record that this highest state or stage may be reached and known even by the incarnate self; and even before it is fully reached results may be accomplished by the individual in and through the physical body which would seem to many, probably to most, to be nothing short of supernatural and miraculous. So little are these results known or understood or credited at the present time, and so little real proof can be offered of them to the world at large, that no useful purpose would be served in attempting to indicate or explain them here.

Here and there in the history of the world some few have manifested to their fellows these divine powers, and have commonly been rewarded with persecution, calumny, and death—though possibly afterwards with deification.

And perchance to-day also, living among us, are many such, though the world knows them not, for they seek neither for the recognition nor approbation of their fellow-men. They can do their work best without these.

The Ideal Realism, then, is the realisation of the true divine nature of the SELF.

The highest possible Ideal which we can at present form as to the true nature of that Infinite Life which is *Ours* must fall immeasurably short of the true Reality.

Are there any divine powers whatsoever which at any time in the world's history any individual has manifested in the flesh?—even such divine powers can be, shall be, and must be yours and mine, in the fulness of time.

Are there any still diviner powers, the powers of vast cosmic Beings by whom, through whom, and in whom, Suns

and Moons, and Planets, vast Solar Systems, and Universes innumerable are brought to manifestation out of the timeless spaceless Pleroma of Primordial Substance, and in due course, having run their appointed cycles, are redissolved therein? —even such powers as these show forth can be, shall be, and must be yours and mine; when, having passed beyond the illusion of separate existence; when—"free from all bodily fetters, free from passions, free from all attachments"—we know the final Truth of all truths that "Thou art That."

The Ideal Realism must begin to realise *now* the real nature and powers of the Self. It does not commence with the development in the individual of abnormal powers; it begins with the realisation that all the powers which we *now* exercise—life, thought, consciousness, will, emotion—in our common everyday life and at every moment of time, *are divine powers.*

If, indeed, we look forward to the possession of these at some future time in a diviner *degree,* in a fulness at present unrealised and even unimagined: they are none the less divine powers in whatever degree we may at present possess them. Unless this is first realised, it is useless to ask for more.

Let each and all put aside the idea that there is anything *commonplace,* or that religion is a special and separate function or development of human nature. All science, all philosophy, all *life* is religious to the man who apprehends the true nature of the Self.

But even when we speak of looking forward to the possession at some future time of a diviner degree or measure of the powers of life and consciousness which we already possess, we are still speaking in conventional terms, and not in terms of the true Idealism. The self which we thus speak of as *we* is still the limited and conditioned personal self. In terms of the higher Idealism, however, the process of *becoming* is a self-realisation of what we ARE, and by no means a becoming of what we are not. The *becoming* is only in consciousness, not in reality.

We have endeavoured to show that there are two modern scientific concepts which help us to realise this strange paradox, that we are, yet are not, so much more than we seem to be.

The first of these is the purely physical one, that physical matter is, yet is not, Primordial Substance. We can speak of the physical atom as disintegrating into etheric substance

as *becoming* ether. Yet it *is* ether all the time—etheric as to *substance*, physical matter as to *form*. The ether, again, may be conceived of as resolvable into the substance of a higher Plane—say, the mental. Yet it *is* the substance of that higher Plane already; and so also is physical matter. In like manner, all the matter on any Plane is ultimately resolvable into the One Primordial Substance; yet it *is* that Primordial Substance all the time; and can never be aught else. It is only the *form*, not the *substance* which *becomes*.

The second concept which helps us to realise this is the psychological concept of the *subliminal self*. The real self must be the self in its *totality*, and not a mere fragment—which is all we are in our normal consciousness, in our physical personality and thread of memory.

But since all things are contained in the ONE, we cannot reach totality short of that ONE, short of the Infinite. The Self in its real nature cannot be less than the Whole Universe.

Possibly there is no *unit* of consciousness which *knows* Itself as the Whole. Absolute consciousness must be unconsciousness, and perchance "the Most High Seer that is in highest heaven . . . knows not." Perchance the highest *personal* God conceivable falls still somewhat short of full self-realisation, is somewhat less in consciousness than the Whole.

Were it otherwise, there were possibly and conceivably no necessity for the great cosmic process or evolution; for all forms of consciousness, all activity of life, must be the activity of self-realisation.

Yet even so, even if personality or individuality must always fall short of Infinity: the Self in its totality must be the Whole Universe—and perchance requires Infinity in order to realise it.

Let us understand not merely that we exist *now* on all Planes of the Universe, not merely that we possess *bodies*—forms of Substance for the indwelling consciousness—on each of the higher Planes, but also that as we fall back upon those bodies or vehicles of consciousness *which are already ours*, we must necessarily enter into a fuller and more universal *mode* of consciousness, or mode of *Being*. Consciousness or Being cannot be destroyed any more than motion: it can only be transferred in degree from one form to another. It must always possess a body or vehicle, its final body or

vehicle being Primordial Substance itself. If our present personal consciousneess may appear capable of *becoming* something which it is not at present, it can only do so by falling back upon some more universal mode of Substance, or by bringing through to the physical brain a deeper and wider consciousness already existing. That which is capable of welling up within us as a deeper consciousness or a fuller life—*is already there.*

Only thus may we truly speak of the Human as *becoming* Divine. Man is both Human and Divine because God is both Divine and Human. The Divine Incarnation is a Cosmic Fact—only mirrored or reflected in any possible historical event.

What higher Ideal, then, can we have than that of our own Infinite Nature ? What higher Reality can we possibly attain to than that of knowing Ourselves in all the fulness of our divine Powers ?

If Man is now the Pilgrim of the Universe, he is a Pilgrim who shall certainly return to claim his inheritance.

In all ages Man has been taught " Thou art That " ; but for the most part this great and final Truth has been a *hidden mystery* which few could receive.

The Path which each must tread is the Path of Self-realisation. We are ourselves the Path.

Behind you, around you, before you, is the Universe—YOU who have power to say I AM I.

WITHIN YOU is the Universe, for—THOU ART THAT.

REEMAN LTD., 129 SHAFTESBURY AVENUE, LONDON, W.C.

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